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Art. I. *Case of Amputation of the Lower Jaw affected with Osteo-Sarcoma.* By J. Randolph, M. D. [With a plate.]

May 20th, 1829, I performed the operation of excision of a portion of the lower jaw, affected with osteo-sarcoma, on Mr. Parke Shee, of Chester, Pennsylvania, aged fifty-three years. Mr. Shee applied to Dr. Physick, for the first time, in the beginning of this month, for advice on account of a large tumour which occupied his lower jaw bone, and occasioned so much deformity as to excite the curiosity, and arrest the attention of almost every person who saw him. He was unable to assign any very satisfactory cause for the existence of this tumour; he recollects to have had several teeth roughly extracted, and thinks, perhaps justly, that this was the origin to which it may be attributed.

The tumour had existed for six or eight years; he first perceived a small lump of the size of a hazle-nut on the external face of the bone, just below the right cuspidatus tooth: it was not attended with much pain, and increased for a long time but slowly. He had been frequently advised to apply for proper relief, but in consequence of being actively engaged in business, he neglected to do so until he became alarmed by the rapid increase in its size, which had taken place in the last few months. The disease at this time appeared to extend from the first bicuspid tooth on the left side to within a short distance of the angle of the bone on the right. No trace of the teeth or alveolar processes could be found on the right side beyond the second incisor tooth; the bone here was expanded, and presented a large, smooth, convex surface, covered by the lining membrane of the mouth. It completely filled up the cavity of the mouth on the right

side, and occupied the space under the tongue of the same side, nearly as low down as its attachment to the os hyoides. The tongue was consequently thrown out of its natural situation, and rested upon the surface of the tumour, this occasioned considerable difficulty in deglutition. Externally, the tumour was pretty regularly convex, and seemed to be principally composed of osseous structure, an evident fluctuation, however, could be felt at the extremity of the chin, and lines could also be perceived denoting several distinct cells or cavities to exist in it, which were afterwards found to contain a thick, inodorous, serous fluid. The size and weight of the tumour was so great as not only to occasion considerable difficulty in mastication and deglutition, but also caused great inconvenience by its continual tendency to draw the lawer jaw downwards and keep the mouth open, from which there was a constant flow of saliva. The patient had, however, entire controul of the motions of his jaw, and could move it freely in all directions.

Mr. Shee having been made fully aware of the particular circumstances of his case, and of the necessity which existed in our opinion for the removal of the diseased mass, promptly expressed his willingness to submit to any operation which we deemed necessary. I accordingly proceeded to its performance, on Wednesday, the 20th of May, in the presence of Drs. Physick, Horner, Tucker, Hays, Gillingham, &c. The patient being seated on a high chair, I made an oblique incision through the lip, commencing at the right angle of the mouth, and carrying it down over the tumour, just in advance of the masseter muscle, I terminated it about half an inch below the base of the jaw. The right coronary artery, which was divided by this incision, was then secured by a ligature. I was now able to dissect off the skin and integuments from the whole external surface of the tumour, as far back as the first large grinder on the left side, at which place having exposed the bone, I divided it with great ease by means of a common key-hole saw, properly sharpened. I now dissected off the integuments from the right side of the bone, as far back as the last molar tooth, at which place I also sawed through the bone, but I experienced some difficulty in doing this, in consequence of the tumour extending so far on this side as to interfere with the motions of the saw. Previously to sawing the bone on this side, the fascial artery, which had been necessarily divided, was taken up and tied. I now completed the removal of the tumour, by dividing the mucous membrane of the mouth, and separating the bone from the mylo-hyoid and its other muscular connexions. This was soon done, as the adhesions between the tumour and the surrounding parts were so slight, that

when the diseased part of the bone was entirely detached from the sound part, I was able to draw out the morbid mass and finish the dissection with but little difficulty.

Throughout the whole dissection I took particular care to cut close upon the surface of the tumour, in order to avoid wounding important parts lying adjacent to it. After removing the tumour, not being satisfied with the appearance of the extremity of the bone on the right side, it was deemed proper to remove another portion of it; I accordingly cut off half an inch of it with great ease, by means of a metacarpal saw, there being no lump now to retard the motions of the saw. The time occupied by the operation was twenty minutes; the patient did not loose more than six or eight ounces of blood. After carefully securing such of the small vessels as bled, I brought the integuments together on the right side, and retained the edges in contact by means of the interrupted suture. A compress was then placed under the chin, and the relaxed integuments were supported by a roller passed round the chin and head. The patient was a good deal prostrated by the operation; in the evening his pulse rose to 85, he however fell into a fine sleep, perspiration came on, and he passed a good night. In the morning I found him with a pulse of 70, since which time he has not had any fever. For the first four or five days he could neither swallow nor speak, excepting with great difficulty; he can now articulate nearly as distinctly as he could do before the operation, and swallows with much ease and satisfaction his nourishment, consisting of whey, milk, eggs, oysters, soup, &c. On the seventh day from the time of the operation, the patient was able to get up and walk about his room, and in four weeks he returned home quite well.

Several saws have been recommended by different surgeons for the purpose of dividing the lower jaw; at the suggestion of Dr. Physick, I used a common key-hole saw; it answered perfectly. I had a saw made similar to the one used by Mr. Syme, of Edinburgh, having a straight blade six inches and a half long, and half an inch broad; but after a trial with each, I prefer the former. As regards the propriety of tying the carotid artery previous to commencing the extirpation, I would observe, that in this case I consider such a procedure would have been highly improper and altogether unnecessary.

The Plate accompanying this paper represents accurately the appearance of Mr. Shee before and after the operation.

With respect to the nature of this tumour, I would observe, that its formation appeared to me to be perfectly independent of any constitutional diathesis. Mr. Shee is the father of thirteen healthy children, he himself in other respects seemed to enjoy excellent health,

and did not exhibit the slightest marks of a scrofulous habit. The disease appeared to me to be strictly local, inasmuch as the external integuments and internal parts, with which it was in contact, were quite sound, and not at all implicated with it; his countenance was natural and good. The disease evidently originated in the cancellated structure of the bone, and while at the same time the tumour was enlarging considerably externally, in consequence of new bony deposition, absorption was also taking place within, and this to such an extent that in several places the bone which covered the tumour became as thin as the shell of an egg, and in other parts it was entirely removed, and its place supplied by a dense fibrous structure. I cannot agree with the French and German surgeons in supposing that all osteo-sarcomatous tumours necessarily possess a malignant character, and are identical with cancer and fungus hæmatodes, diseases so connected with a morbid state of the constitution, and so liable to contaminate the adjacent parts, that their removal seldom enables us to calculate upon a cure. Had this tumour, which originated in my opinion from common inflammation, been excited in a constitution impaired and predisposed to morbid actions, I can readily imagine that it should have possessed a highly malignant character, with which the constitution should have become deeply involved, and that its removal would not insure the patient from a return of the disease.

But, inasmuch as the inflammation attacked a healthy constitution, and the patient was not subjected to any adequate treatment for its removal, it was suffered to progress until it occasioned the alteration in the structure of the bone which I have described, and which I do not believe possessed a malignant character, but was so entirely local as to warrant me in hoping that my operation would be permanently successful.

Pl. I. fig. 1. represents the appearance of the patient before the operation; fig. 2. after the operation.

Philadelphia, July 27, 1829.

ART. II. *Fœtal Bones coloured with Madder.* By R. D. MUSSEY, M. D. Professor of Anatomy and Surgery in Dartmouth College, Hanover, N. H. [With a plate.]

THE nature of the communication established between the blood-vessels of the mother and those of the fœtus, is, perhaps, still a problem. From the almost uniform failure in attempts to inject the one

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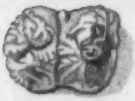

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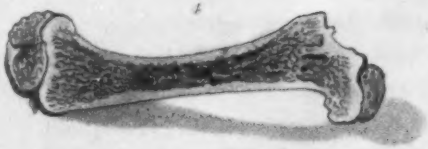

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set of vessels from the other, it has been inferred that no *direct* communication exists between them; and some physiologists have been emboldened to doubt even the existence of any communication whatever.* In a French periodical,† however, it is stated, that Le Cat, in 1752, and again in 1754, succeeded, by injection, in fully demonstrating to the Acadamy and to the commissaries of that institution, what was considered to be a direct communication between the vessels of the fœtus and those of the mother, in cases where the placenta remained attached to the uterus after death.

The following experiments, which, in so far as I am informed, are new, will serve to show, that, with one of the tribes of lower animals, whatever be the nature of the communication between the vessels of the uterus and those of the ovum, it does not forbid the passage of a foreign substance from the one to the other.

I caused a sow, during the last eight weeks of gestation, to be fed with madder, by mixing daily about three or four ounces of it with the food of the animal. On the day the farrow was produced, several of the pigs were killed, and their bones inspected. Every bone was strongly tinged with red. The teeth were stained of a delicate pink colour. The engraving exhibits tolerably well the effect of the madder upon the teeth, and upon one of the large bones.

Explanation.—Pl. II. fig. 1. A cuspid tooth. Fig. 2. Concave part of a partially formed grinder. Fig. 3. Convex part or grinding surface of the same specimen; the enamelled points white. Fig. 4. Interior of the thigh bone, cut longitudinally.

In another experiment, more recently made, a sow within a month as nearly as could be ascertained of bringing forth her farrow, was made to eat four ounces of madder daily, for twenty days, and was then bled to death. The urine of the animal was very high coloured, but was much deepened by the addition of a small quantity of the solution of potash. The serum of the blood too, after the red particles were allowed as much as possible to subside, was of a red colour, which was suddenly heightened by the addition of the alkali. Half a dozen of nearly full grown pigs were found in the uterus.

The liquor amnii was repeatedly tested. It yielded a distinct tinge of red when the potash was applied to it. The proportion of madder, however, in the liquor amnii must have been small, for when

* I have heard a lecturer of eminence declare his strong doubts of the existence of any sort of communication between the fœtal and maternal vessels.

† Recueil Périodique d'Observations de Médecine, Chirurgie, Pharmacie, &c. 1754. Tom. I. p. 253.

a small volume of it was tested with the alkali, the appearance of a red tinge was not satisfactory; but when tried in the following manner, the change was very manifest. About two drachms of the colourless, or nearly colourless liquor amnii was put into an ounce phial, and as much into another phial of the same size. These were placed side by side, and the solution of potash dropped into one of them; the red tinge was immediately acknowledged by a number of gentlemen, before whom the liquor amnii was thus repeatedly tested.

The colourless liquor in the stomachs, and the pale urine in the bladders of the fœtal pigs, were found in too small quantity to admit of a satisfactory application of the test. In this last experiment with the sow, the teeth and other bones of the fœtal pigs exhibited the red colour quite as strongly as did those of the first experiment, in which the mother was fed *eight* weeks upon madder, instead of twenty days. The bones of the *sow*, in the last experiment, were dyed of a fine red approaching scarlet. Thus it appears that the colouring matter of madder is capable of existing not only in the serum of the blood, in the urine, but also in the liquor amnii, and of circulating harmlessly through the delicate organs of the fœtus, in different stages of their development and growth.

Hanover, New Hampshire, May 19th, 1829.

ART. III. *Parodynia Perversa, complicated with Hydrops Ovarii.* By JESSE W. MIGHELS, M. D. of Minot, Cumberland County, Maine.

IN February, 1827, Mrs. Campbell, æt. about thirty, of sound constitution, above the middling stature, sanguineous temperament, strong, athletic, and of a cheerful temper, consulted me on account of a tumour in her side. On examination, I found in the left hypogastric region, an indolent, insensible, globular, moveable tumour, apparently about as large as an ostrich egg, occasioning no inconvenience but from its weight.

I had attended her twice in parturition. With her first child, which was now about three years old, she was in labour twenty-four hours, and although she had the advantages of a natural presentation and well-developed pelvis, she was extremely sick. With her second, at this time about a year old, the presentation was natural, and labour comparatively easy. She stated that she discovered the tumour a few

weeks subsequent to the birth of her second child, that it was then about as large as a goose egg, and that it had gradually and almost imperceptibly attained its present dimensions. She also stated that she had had her menstrual discharges regularly for a number of months, although she still nursed her child.

I did not hesitate to pronounce it an enlarged ovarium, and, as her health in other respects was perfect, advised her to forego the use of all active medicines, to accustom herself to moderate exercise, and diet abstemiously.

In about six or seven weeks I was requested to visit her again. The increase of the tumour had been truly astonishing. It now extended to the epigastrium, filling almost the whole peritoneal sac. She was nearly as large as formerly at her full period of utero-gestation, complained of great pressure, sour eructations, loss of appetite, and costiveness; had menstruated a few weeks previously. I requested the attendance of Dr. Tewkesbury, who concurred with me in opinion that it was ovarian dropsy. We directed her to keep her bowels pervious with rhubarb and carbonate of magnesia, to wear a suspensory bandage, and anoint the abdomen with a liniment composed of spt. terebinth. one part; olive oil and spt. ammon. aa. two parts.

I saw her again in about a week, when the above symptoms had generally disappeared. No apparent change in the tumour. Ordered blue pill, ten grains, every other night at bed time; a tea-spoonful of spirit of ammonia in infusion of chamomile twice a day; to keep her bowels free with elixir proprietatis or rhubarb; light nourishing diet and moderate exercise. In June she consulted me on account of amenorrhœa. She had increased considerably; informed me she had consulted an empiric, who had given her drastic cathartics, but that she was convinced it had done her no good. She had not menstruated since I last saw her. She was evidently in a state of pregnancy. I directed her to use such palliatives as her case might from time to time demand.

She was taken in labour, November 29, 1827. I saw her at seven o'clock, P. M. She had pretty strong expulsory throes. On examination per vaginam, the os uteri was not to be found. In sitting, standing, or lying upon her side, the uterus was evidently in front of the tumour, and in sitting she literally held her child in her lap. Her size was enormous, and in order to avoid exaggeration, I measured her with an accurate scale, and found, that from the sacrum to the utmost extent in front, she measured two feet and three inches; in circumference, five feet and four inches.

Lying upon her back, the uterus would fall alongside of the tumour, which gave her the appearance of having two gravid uteri, resting upon the rings of the ilium, one upon the right and the other upon the left. The depression or fossa lying betwixt them commenced a little to the right of the symphisis pubis and run upwards in a line, about half way betwixt the linea alba and linea semilunaris, and terminated at the scrobiculus cordis.

Apprehensive that it might be necessary to lessen the tumour by paracentesis, and that the case might be attended with difficulty and danger, I requested advice and assistance, which I was denied. Till twelve o'clock her throes were very severe, from which time till 2, A. M. there was a slight recess; os externum rigid; os uteri out of reach; slight pain in the head. Bled her twenty ounces, and gave one hundred drops of laudanum, which rather increased the force and frequency of the pains. At three o'clock the membranes gave way spontaneously, and gave exit to a large quantity of liquor amnii. I then made an effort to introduce my hand, but failed, in consequence of the great rigidity of the parts. From this time till seven o'clock the pains were tremendous, but produced no apparent change. From seven till ten o'clock she had but little pain; slept some. At eleven o'clock the pains were truly terrible, and on examination I found that the os externum began to yield. I directed her to be placed upon her back, the nates resting upon the edge of the bed, and her trunk considerably elevated.

In this position I readily introduced my hand, found the os uteri above the brim of the pelvis, very far to the right of the centre and considerably dilated! The tumour occupied at least two-thirds of the bony circle. I could not recognise a space of more than an inch and a half betwixt the tumour and ilio-pubic juncture. I was about to withdraw my hand, with the determination to evacuate the contents of the sac by an operation, when a violent pain came on, which evidently caused the tumour to recede, and taking advantage of the recess of pain passed my hand by it, and ascertained that the breech presented. I found but little difficulty in bringing down the feet, in doing which the sac burst, and its contents issued into the cavity of the abdomen, the uterus took its natural situation in the centre, and the labour was finished in a few minutes, child still-born.

During the four or five subsequent days, she discharged enormous quantities of high-coloured urine; in one night five quarts! In three weeks she was up, doing her work, in perfect health, and no larger in circumference than before she had the tumour.

It began to exhibit itself again, in January, 1828, increased gradually till June, when it burst spontaneously, and disappeared again with great celerity through the kidneys. It very soon reappeared, progressed with great rapidity, burst in August, and passed off as before. She remained feeble for a number of weeks, exercised with considerable pain about the abdomen, and some hysterical symptoms, but recovered perfectly.

January 12th, 1829. I was called in the morning, and learnt that she had been indisposed for five days, and that she had been exercised with strong expulsory throes during all the preceding night. Externally, she appeared much as in 1827, but broader laterally. In sitting or standing, the abdomen appeared smooth and regular, but lying upon her back there was a much more distinct fossa betwixt the uterus and tumour than before. In circumference she measured five feet. On examination per vaginam, the os uteri was not to be found. The pains continued very severe till twelve o'clock, from which time till 1, P. M. there was a slight recess. In passing my hand partially through the os externum, I could plainly recognise the bottom of the tumour, which appeared to fill the whole of the upper part of the bony cavity.

In view of all the circumstances of her case, I could not conceive it possible for the child to pass without lessening the tumour by giving exit to its contents, which opinion I communicated to her friends, and desired counsel, which they objected to, believing that I might succeed as before, and desired me to do whatever I should deem necessary for her relief. As, however, the operation of paracentesis was unusual, perhaps unprecedented in her situation, I did not feel at liberty to do it unadvised.

At three o'clock her throes were very powerful, and finding the external parts well dilated, introduced my hand and found the os uteri jammed in betwixt the distended sac and ilio-pubic juncture, and considerably dilated in the form of a crescent. The tumour was stationary, and although I could make considerable pressure upon it, I could not obtain a space of more than an inch for the passage of the child. During this examination the membranes gave way, and allowed exit to the liquor amnii, accompanied with the funis umbilicalis, which pulsated feebly. I again represented her case to her friends, and requested them to procure assistance, but Dr. Tewkesbury did not arrive till the next day at noon. By venesection and opium she was kept pretty comfortable during the night. On examination at eleven o'clock of the 13th, I found the left arm protruding through the os uteri. Dr. Tewkesbury arrived at twelve o'clock, and advised an attempt

at turning, but on further investigation he concurred with me, that lessening the tumour by paracentesis was the only alternative. We accordingly perforated it with a pretty large trocar, in the linea semilunaris about five inches above the crista ilia, and evacuated eighteen pints of bloody water resembling dirty claret, perfectly limpid and inodorous. This afforded great relief, the uterus resumed its natural situation in the centre of the abdomen, and there can be no doubt, had the presentation been favourable, the child would have been expelled in a short time.

But, although we had removed one difficulty, we still had before us all the perplexing and discouraging circumstances of a protracted case of preternatural labour of the worst kind. Although naturally possessed of as much firmness and fortitude as a lioness, our patient had become irascible and peevish; the parts, although well dilated, were tender and irritable, and the uterus had contracted with unyielding firmness about the child; pulsation had ceased in the funis; the head of the child was unquestionably situated in the left side, and the feet at the farthest possible distance from the os uteri; there was no pain. We attempted turning, and, availing ourselves of every possible advantage, persevered in the usual way for two hours, to no effect. So far as I could introduce my hand, the uterus presented the appearance of being encircled with strong inelastic bands, three-fourths of an inch in breadth, drawn around it with incredible force. The cervix was preternaturally elongated, but so well dilated as to admit the hand readily.

Failing to afford relief in this way, we concurred in the expediency of removing the child by embryulcia. We accordingly removed the arm with the scapula and clavicle, penetrated the chest with a perforator, and so far succeeded as to introduce my hand into it and grasped the heart and lungs, when she became impatient, and bounded out of our reach, absolutely refusing any further assistance. One object was to remove the thoracic and abdominal viscera, in order to make room to introduce the hand to the feet, or to enable us to fix a blunt hook upon the pelvis, but we were defeated: we could not prevail on her to suffer another trial. We bled her twenty ounces and gave her a large anodyne, but fearing more trouble and perplexity, we sent for Dr. Carr, who arrived at eight o'clock. She again submitted to the operation, but soon became impatient, and we were obliged to withdraw. We gave her a full dose of laudanum, which procured a pretty comfortable night's rest.

In the morning of the 14th she appeared rather more pliable. The external parts were very little swollen. On introducing my hand, I

found that the child had made a partial evolution and presented the right shoulder. With the blunt hook we brought down the arm, which had become so tender by putrefaction that it readily came away with the scapula. She soon became impatient, and sprang out of our reach, requesting us to leave her. At ten o'clock her friends prevailed on her to submit again, but she became discouraged sooner than before, and requested us either to give her the benefit of the Cæsarian operation, or leave her to her fate.

She was perfectly sane, pulse a little accelerated, skin rather sallow, tongue furred, but on the whole no more exhausted than the generality of women at the close of an ordinary labour. She conversed freely, and was evidently perfectly aware of her danger, but she had superstitiously imbibed the impression that she should die undelivered, and expressed the belief that we were doing violence to an immutable decree to make use of any further means for her relief. We left her at noon, on Wednesday the 14th.

I visited her again on the 16th, and received the following account: that she was exercised with incessant throes, till Thursday evening, (although during the time she took half an ounce of laudanum,) when it seems that a complete *evolution** had taken place, and the child was expelled "head foremost." An old midwife present informed me that as soon as the child was expelled, she introduced her hand and took the placenta. On examination, I found the child in a very putrid state, the head elongated and almost destitute of brain, so that the two parietal bones were almost in contact.

The patient was very feeble; face scarlet; pulse 120, quick, hard, and wiry; tongue dark coloured; unquenchable thirst; head painful and giddy; abdomen considerably distended and extremely tender; uterus appeared unaccountably large; mind sane. Bled her eight ounces, ordered fomentations, and adopted the antiphlogistic regimen to its full extent. No essential change till the 19th; fever much increased; abdomen distended, hard, and tender; lochia suppressed; bilious diarrhœa. Ordered calomel and rhubarb, a large epispastic to the abdomen, and an anodyne at bed time.

20th. Has had a very restless night. Cathartic had operated; abdomen extensively blistered, much distended, and elastic; countenance cadaverous; pulse hardly perceptible; respiration rapid and sonorous; hiccups; extremities cold, and the whole body covered with a profuse clammy sweat. She remained in this state about two days,

* See Denman's Midwifery, p. 135. Vol. 2d.

and at some times there appeared to be a complete suspension of the vital functions.

22*d.* The lochial discharge reappeared, attended with a mild diarrhœa and evident symptoms of amendment.

25*th.* Strong pains supervened in the evening, resembling after-pains in ordinary cases, which terminated in the expulsion of the placenta in a state of putrefaction.

February 4*th.* The sac had become completely distended, causing much uneasiness. I immediately perforated it with the trocar, and evacuated five quarts of very offensive matter, resembling in colour strong chocolate. She dragged out a miserable existence till the 24th, when, from spontaneous bursting of the sac, she succumbed.

On examining the body, an hour after death, we were almost suffocated with the most offensive stench. About two quarts of matter had escaped into the right side of the abdominal cavity, which was perfectly separated from the left by the firm attachment of the great sac to the peritoneum, mesentery, and intestines. The dropsical effusion evidently commenced in the peritoneal covering of the ovarium. The ovarium itself was but a very little diseased, being only a little indurated and enlarged, and so completely imbedded in the sac as to appear to make a part of its walls. We discovered the spontaneous laceration at the upper part, where it was in contact with the liver. From all we could discover, we were of the opinion that this was the point at which it had burst formerly; being at all other parts perfectly smooth and regular, but here considerably thickened and hardened, excepting at the centre, where the rupture appeared. The sac itself contained about ten quarts of very offensive pus. The small intestines were crowded into the epigastrium, being firmly attached to the vertex of the sac. The liver, spleen, pancreas, and kidneys were sound. The uterus appeared as usual at this period of the puerperal state, but removed from its natural situation and crowded firmly into the right hypogastrium. The peritoneal covering of the bladder and sac had so firmly united as to appear like one membrane.

Reflections.—In view of this case two important practical facts present; 1st. As it regards the expediency of an operation during labour, under circumstances like those above related. I do not recollect of having ever seen a case recorded precisely like this, but should another occur, I should consider a seasonable operation of primary importance. 2d. It is believed that too much stress is laid upon the importance of artificial interference in cases of malposition.

In cases attended with hæmorrhage, or when the feet or pelvis may be *easily* commanded, or when circumstances render turning easy, it may and ought to be resorted to, but not in cases like this. Further, in *ordinary* cases of presentation of the shoulder or arm, it is believed that it is more expedient, that it is safer to trust the case to nature, than to interfere with *any* degree of violence. Spontaneous evolution *will*, in nine cases out of ten, take place. With a view to facilitate the evolution, I would merely remove the presenting part, bleed according to circumstances, and allay irritation by the occasional use of anodynes.

Minot, Cumberland County, Maine, July, 1829.

ART. IV. *Account of a Purulent Ophthalmia that prevailed at Fortress Monroe, in Virginia, in the years* 1826–27. By Dr. ROBERT ARCHER, United States' Army.

THE ophthalmia which is the subject of this paper, was introduced by a company of artillery from Fort Independence, Boston Harbour, which arrived on the 9th of April, 1826, at Fortress Monroe.

Dr. MANN, the attending surgeon at Fort Independence, has furnished me with some important facts in relation to its history. He says it made its appearance at that post in the autumn of 1824; that between the first of September and last of December of that year, eight cases were reported, and twenty-seven of the most aggravated form in the year 1825, besides many milder ones. More than two-thirds of the company therefore had been attacked before it left Fort Independence.

Four of the company only were affected at the time of its arrival at Fortress Monroe. Of these, two had ulcers and opacity of the cornea, and the other two a milder form of the disease. Whether a removal from the infected atmosphere of Fort Independence had arrested the disease, or whether the sea voyage and change of climate had destroyed the susceptibility, in those who continued healthy, to receive it, I know not, but after leaving Boston but one new case occurred.

This company continued to occupy the quarters that had been assigned to it on its arrival at Fortress Monroe, until the 6th of December following, when they were vacated, and another company put in, whose rank entitled it to that position in the order of the battalion.

It may be well to mention, that the only fixtures in the soldiers' barracks are the bunks; when a company moves, it takes with it every moveable article, and it is an uniform practice for the rooms to be thoroughly cleansed and white-washed, before or immediately after they are reoccupied. I am thus particular in noticing this fact, because if the bedding, or any thing else that had been used by this company had been transferred to its successor, we might find less difficulty in accounting for the reappearance of the disease.

In November, 1826, I was relieved from duty in the regiment, and tranferred to another department at the post; the minute details of the cases therefore, which occurred between that period and the subsequent November, when I rejoined the regiment, were communicated to me by my friend Dr. Everett, the senior surgeon of the post.

About the 4th of March, 1827, the first case in the new company exhibited itself; this, it will be observed, was three months after removing into the quarters. The symptoms being very similar to those of ordinary ophthalmia, no alarm was excited, as no suspicion could exist that the contagion had lain dormant for such a length of time after the quarters had been vacated by the infected company; nor was there any reason to suppose that the disease was contagious, for as the company at Fort Independence were all exposed to the same exciting cause, they were all equally liable to contract it, and the disease might have been considered as epidemic, or rather endemic. The lapse of a few days, however, proved it to be similar in every respect to that brought from Fort Independence, and of a most malignant character. The cases began rapidly to multiply, and in spite of every precaution, such as removing the men on the first symptom of infection, and the strictest attention to police, it pursued its regular course until the 14th day of January, 1828, when the last case was reported.

Of forty-five men who composed this company, twenty-three became infected, and it is not a little remarkable that the disease should have confined itself, in the first instance, to a particular spot; for it was clearly ascertained that the first six cases originated in individuals who had slept at some period in the same bunk.

Each company of the regiment occupied one long room, and it may be urged that the disease was promulgated through the medium of the vitiated atmosphere of the room, and therefore that it was not strictly or technically contagious; but, to put this question beyond dispute, it will only be necessary to state, that at a time when there was but one ophthalmic patient in the hospital, the two men of

different companies, who occupied the beds on either side of him, both took the disease, and had it in its severest forms.

The progress of this disease may properly be divided into three stages. The first symptom the patient complains of, is a sensation in the eye similar to that produced by the irritation of a grain of sand; the vessels of the conjunctiva are engorged; the inflammation of that portion covering the sclerotica diminishing as you approach the cornea, but unusually severe when it lines the inferior palpebra. This appears to be the part primarily affected, and to constitute the pathognomonic symptom of the disease, for in several cases where I could scarcely perceive a discoloration of the albuginea, the strongest marks of inflammatory action were perceptible on this portion of the conjunctiva. In this stage of the disease the patient experiences rather uneasiness than pain, for although the eye is somewhat sensible to the impression of light, it is not sufficiently so to render a screen at all necessary. Unless you are fortunate enough to arrest the disease here, the most violent symptoms now supervene; the conjunctiva becomes turgid with blood, and frequently protrudes beyond the palpebræ, resembling a lump of raw flesh. You no longer discover the beautiful net-work of vessels that characterized the first stage; the cornea appears sunk; the palpebræ so swelled as with difficulty to be separated; ectropion; entropion; the pain in the eye excruciating, with a large secretion of hot fluid, generally intermixed with purulent matter; the intensity of the heat sometimes so great as to make the patient complain of its scalding his cheek. Opacity of the cornea, ulceration, rupture of the coats, and evacuation of the humours succeed this, and constitute the third stage.

The inflammation in this disease seems to be of a specific character, for although, as I before stated, the early symptoms are very similar to those of simple ophthalmia, a minute examination will at once detect the difference, and render it a very easy matter at the first inspection to pronounce between them. The conjunctiva in every instance exhibited a rough, honey-combed appearance, similar to what would probably result from the application of a strong mineral acid. Mr. Saunders is, I believe, the first writer who has noticed this peculiar granulated appearance of the conjunctiva.

In the treatment of this disease, I regret I am not able to add much to the stock of knowledge already in possession of the faculty. Every means that might be supposed, directly or indirectly, to exercise an influence over it, were tried with most determined perseverance. Venesection, cathartics, fomentations, poultices, scarifications, astringent and emollient collyria, blisters to the temples and

nucha were all resorted to, and although the symptoms in one case were partially mitigated, in another they were apparently aggravated. The plan, however, which was most successful, and that on which I would with most confidence rely, should I ever encounter the disease a second time, was the following. In the first stage the patient should be copiously bled, and purged with neutral salts, and subjected to the *strictest* antiphlogistic treatment. Moderate bleedings appeared to exert no influence over the disease; blood-letting should be repeated and carried as far as the circumstances of the patient would permit. Scarifications of the conjunctiva appeared to have no effect in reducing the inflammation, although, arguing *à priori*, I should be very loth to dispense with them, more especially when leeches could not be procured, as was the case with us. Emetics of tartarized antimony, frequently repeated, together with nauseating doses of the same, were found particularly appropriate. Collyria of lead and zinc in the first stage were injurious, those of an emollient nature totally inert, but throughout every stage a liniment composed of ol. oliv. and mur. hydr. in the proportion of one or two grains of the muriate to one ounce of oil, was used with decided advantage. The corroded surface of the conjunctiva required some lubricating substance to counteract the attrition produced by the constant motion of the ball and eyelids, and although the application produced great pain for a few seconds, it soon subsided after a copious secretion of tears, and left the patient in comparative ease.

From the vinous tincture of opium, so strongly recommended by Ware, I do not think any advantage resulted, although I gave it a very fair trial.

Calomel and the blue pill, both as alterants and sialagogues, were employed without effect. In one or two instances, blisters to the temples I thought rather aggravated the inflammation, but when applied directly over the eye, their salutary effect was most manifest; this method of applying them was adopted at an early period by my friend and associate Dr. Everett. It is a practice I can not recommend in terms too strong, for if there was any treatment universally and unequivocally successful, it was this.

To relieve the excruciating pain attendant upon the second stage, I found nothing to equal the infusion of the *Datura stramonium*, applied by means of cloths to the eye. It was continued from one to three hours, according to the violence of the pain, and never failed to relieve it. No evil resulted from its frequent application, although the pupil in every instance was so dilated as to reduce the iris to a delicate ring. This remedy promises to be of considerable importance

in ophthalmias generally, attended with severe pain in the eye, and deserves farther consideration.

In ulceration and opacity of the cornea, the solution of nit. argent. in the proportion of one or two grains to the ounce, applied by means of a camel's hair pencil, was used with advantage, and when the conjunctiva becomes so engorged as to produce eversion of the eyelid, I am convinced that the best practice is to slice it off. By doing so, you take away the principal source of irritation from the cornea, touch the rough granulated surface of the conjunctiva, and I believe produce a new inflammatory action, more manageable and totally different from the former.

To what cause are we to ascribe the origin of the disease at Fort Independence? Its extension, we think, we have clearly demonstrated to depend on contagion.

It appears from the statement of Dr. Mann, that sore eyes were more frequent in Boston about this time than usual, although not characterized by any uncommon symptoms. An ophthalmic constitution of the air, as SYDENHAM would have called it, was probably then the remote or predisposing cause of the disease, and to the peculiar locality of the fort, the duties, the habits, and the dress of the soldiers, I think we may with some propriety ascribe the exciting cause.

Fort Independence is situated on a small island of ten acres, in the harbour of Boston. The parade ground included within the walls of the fort, comprises an area of about sixty yards by thirty. This, with a view to police, and to render it firm, has been covered with a stratum of coarsely pulverized gray stone of the *schistus* formation: there is nothing for the eye to rest upon, but these particles of slate, acting as so many reflectors of light and heat, the yellow-washed brick walls of the quarters, and an extensive sheet of water.

The soldier, from the nature of his duties, is necessarily much exposed to the direct influence of the solar rays. As a sentinel, he stands on his post for two hours; his fatigue duties are generally, and his drills and other exercises always, performed in the open field, so that I think we may safely say he is exposed, from necessity or choice, at least eight hours out of twelve to the effects of the sun; and when we take into consideration that the only covering to the head worn at that time by the soldiers, except on parade and guard duties, were woollen forage caps, fitting as close as the scalp, and those too without visors or screens to protect the eyes, we need look no farther for a cause adequate to produce the effect described, in individuals remotely predisposed to the disease, by the prevailing constitution of

the air and their too general habits of intoxication. Dr. Mann remarks that none had the disease severely, except notorious drunkards. There were at this time about twenty women and children at Fort Independence, not one of them, or any of the officers, took the disease; which goes very far to prove that the habits of the men, their exposure to the sun, and the use of the forage cap, tended materially to the production of the disease.*

Fortress Monroe, August, 1829.

ART. V. *Remarks on Otitis.* By GEORGE F. LEHMAN, M. D. Lazaretto Physician of the Port of Philadelphia.

IT has been observed by distinguished authority, that inflammation of the ear is generally limited in its extent, and seated so far out of our reach that bleeding is seldom employed, nor is the constitution so much affected as to render any general remedies necessary.

Several cases of unusual violence having fallen under my notice, which required corresponding measures for their relief, and entertaining an idea that the pathology and treatment of this affection are not sufficiently elucidated, the following observations are made.

The causes of otitis are generally those which create inflammation in other parts, such as exposure to cold, particularly a current of cold air, or the direct application of snow, ice, or cold water to the ear, mechanical violence, the introduction of exotic substances, as a ragged bone, a cherry-stone, or worms, insects, or the larvæ of insects, into the ear, many cases of which are on record. I once witnessed a severe inflammation of the ear occasioned by the sting of a wasp.

When inflammation is confined to the meatus auditorius externus, it is characterized by slight pains in the ear, and is relieved by the introduction of a few drops of thebaic tincture, tincture of digitalis, oleum olivæ, or oleum amygdalæ into the ear, and warmth applied by flannel.

In this state of the disease, the application of a few drops of the tincture of digitalis usually affords as much relief as any other remedial agent. Stimulant errhines may be also used with advantage.

* We beg leave to refer our readers to a paper on Purulent Ophthalmia, in the thirteenth volume of the Philadelphia Journal of the Medical and Physical Sciences, in which we have attempted to point out the true character of that disease.—ED.

The causes of this infection are not to be overlooked in its management. If it depends on the presence of foreign bodies, they must be extracted; if on insects or the larvæ of insects, the proper remedy to suffocate them will be a few drops of olive or almond oil dropped into the meatus externus.

In common cases, indicated by slight pains only, and brought on by the direct application of cold, the disease depends very often simply on the constriction of the excretory ducts of the glandulæ ceruminosæ; to relieve which the appropriate treatment is warm fomentations, to restore the ducts to their natural action. Sometimes the introduction of tepid water or steam will be sufficient.

If the inflammation extends to the membrani tympani, the pain is sharp, lancinating, and throbbing, reaching to the temporal bone. The brain is often affected, creating delirium, the tongue is furred, and the action of the heart much increased. The disease advancing, suppuration follows, and a discharge takes place.

Sometimes the membranes of the brain are affected, causing phrenitis, and the temporal bones become carious, and death is occasionally the consequence.

Dr. Powell, in the Medical Transactions, Vol. V. page 212, relates the case of a lad of sixteen years of age, who had suffered two attacks of otitis preceding the fatal one, in which the pain was intense, yet the pulse never exceeded 72, and the operations of the mind were unimpaired.

When we consider that the membrani tympani is stretched very tensely over the tympanum, and is chiefly formed of the periosteum, it can excite no surprise that the pain is so very excruciating in inflammations of this membrane. Besides, it has an abundance of small vessels, supplied by the stylo-mastoid and temporal arteries.

So extreme is the sensibility of this membrane, and the sufferings of the patient so acute, that his reason is often affected, but the suppurative process advances with rapid strides to relieve his agony, and the parts afterwards, in a great majority of instances, heal kindly and in a short period.

No stronger proof exists of the vis medicatrix naturæ than the general tendency of all inflammations to the surface. It is an instinctive effort of nature to save her vital parts from the presence of matter, which, from its irritating qualities, would bring about very serious consequences. This observation, indeed, applies to all the great cavities of the body; innumerable instances in support of which might be derived from morbid anatomy, which must be familiar to all practical men. If an inflammation attack the peritoneum covering an in-

testine, and adhesions are hereby produced between the two, the inflammatory action works upwards through the thick walls of the abdominal muscles, while the proper coats of the intestines in most instances remain sound. We even find that if abscess form in a frontal sinus from an obstruction in its duct, the matter will rather work its way externally through the frontal bone, than descend into the nose. In like manner, if an inflammation attack the cellular membrane on the outside of the rectum near the anus, although the latter be in contact with the inflamed part, the inflammation will extend to the skin of the buttock, while the gut itself is often but little affected.*

If the inner surface of the tympanum or labyrinth becomes inflamed, the disease assumes a very important character. The pain is continued and most excruciating; coma or delirium is common; the pulse is much excited, and in every instance the constitution is affected; suppuration takes place; the pus finds a lodgment in the labyrinth; the bones become carious, and total deafness follows. The whole structure of the ear is destroyed, even the bones are sometimes discharged through the meatus auditorius, with very fetid matter, and fistulous ulcers supervene upon this, which are very troublesome.

In a few rare instances the inflammation has extended to the brain, affecting the membranes and surface of the organ, and coating them with coagulable lymph, pus, or both. As the disease approaches this condition, topical applications are of no avail. We must now have recourse to active and copious depletion, and the first and most beneficial is venesection, which may be carried to a great extent.

Active purgatives must always be resorted to, it matters not whether calomel, castor oil, or the saline purgatives are used, so that the doses are liberal enough to act promptly and freely. After this is done, cupping, leeching, and blistering behind the ear, are very salutary. The hot pediluvium is occasionally serviceable.

So soon as the arterial excitement is diminished, the pain is usually relieved, at all events to a certain degree, then the introduction of a few drops of the tincture of digitalis into the ear will be proper.

When, however, the disease does not yield to this treatment, and the pain continues severe, we must depend on narcotic cataplasms, and fomentations to moderate it, until suppuration takes place, and pus is discharged from the external meatus, which usually affords a cessation from pain. Tepid water, or milk and water, are then to be injected repeatedly into the ear to wash it out; or you may syringe

* Good's Study of Medicine, Vol. II.

the ear now and then with gum Arabic water, or any other mucilaginous infusion, and mild astringent decoctions, and in a short time, the parts will be restored, to their usual healthy condition. The regimen during the continuance of inflammation ought to be cooling and light.

There is a species of ear-ache denominated nervous. It is generally symptomatic, and is almost always the effect of gastric irritation, or some irregularity in the alimentary canal. An active cathartic generally removes it, with the insertion of a few drops of laudanum, ether, or the tincture of digitalis into the ear.

I have attended a lady, the mother of seven children, who is first warned of her conception by a severe ear-ache. It happens occasionally until the sixth month of her pregnancy, when it entirely disappears. Twice I applied mustard cataplasms behind her ear, but she has been usually relieved, by the introduction into the external meatus of cotton impregnated with the tincture of digitalis, preceded by a gentle dose of sulphate of magnesia.

If a diseased tooth is the cause of ear-ache, it should be extracted, or remedies applied for the relief of pain to the tooth. For this purpose opium and camphor may be applied directly to the tooth, or ether on the cheek of the affected side.

In the decline of malignant fevers, ear-ache sometimes supervenes, which, when severe enough to require medical attention, is overcome by the common topical applications. Sialogogues are recommended by Dr. Good.

Dr. Kennedy of Glasgow has broached a new practice in the treatment of acute inflammatory ear-ache.

The following case illustrates his pathological and therapeutical views.

"D. G. a lad of sixteen, of full habit and healthy, experienced a general chilliness, and other feelings of discomfort, in the evening after travelling in a stage coach, the windows of which were occasionally let down during the journey. At the same time the atmosphere was moist and cloudy, while a cold wind blew from the north-east, and his right side was, in consequence exposed to its action. At night he bathed his feet in warm water, had a warm drink, and went to bed, complaining very much of sharp wandering pains in the throat, neck, and right side of the face, with increasing difficulty of deglutition, and a stinging, deep-seated pain in the ear. Next morning early, he was roused from an unrefreshing slumber, by a severe paroxysm of ear-ache, accompanied with aggravation of all the precursory symptoms. For that day and the following, he was subjected to the

discipline of a domestic treatment, composed chiefly of saline aperients, in defective doses, frictions of the throat, with ammoniated liniment, and the insertion of laudanum on cotton into the affected ear. Such means however proving insufficient, the disease progressively advanced, and late on the third day came under my observation as a true otitis, distinguished by the certain signs, local and general, of inflammatory excitement. On this occasion, slowness of the bowels, loaded tongue, heat and constriction of the skin, hoarseness, head-ache, with throbbing of the cephalic and cervical vessels, difficulty of swallowing, sense of cold all along the spine, excessive sensibility, and tumefaction of the right side of the face, eyelids and neck, and an excruciating pain within the ear, which underwent intense exacerbations, with much disturbance of the respiratory and sanguiferous functions, afforded the grounds of a therapeutical indication.

Without loss of time, an active emetic, thirty grains of ipecacuanha, and three of the antimonial tartrate, was administered: its effects were powerful but not excessive; and the advantages derived from them were immediate and decisive. Before the last paroxysm of vomiting ceased, all the more urgent symptoms had nearly subsided; and the patient on reclining himself to rest, soon fell into a tranquil sleep, during which a general and profose perspiration supervened. Before midnight three copious alvine dejections were obtained: and he passed the morning in a state of uninterrupted repose."

Dr. Kennedy concludes, from the history of this case and others, that acute, and even complicated otitis, may be subdued by emetics and cathartics without the assistance of blood-letting.

I have pursued the course here adopted in two similar cases, but without the same fortunate result. In both instances bleeding topically, blisters and warm fomentations, eventually overcome the inflammatory diathesis. Indeed, from direct experience and analogy, it is very doubtful in the acute forms of the disease, simple or complicated, whether any other remedial agents would accomplish the cure. The usual characteristics of inflammation on visible parts are heat and pain, redness and increase of the part diseased, and no doubt similar changes exists in all internal inflammations, or those which are not ocular. It is at first limited to a point, but by continued sympathy embraces contiguous parts, and sometimes parts so remote as to excite no little astonishment.

Mr. Hunter explains very beautifully the origin of inflammation, by comparing it to a blush, or a simple increase of the diameter of the vessels in consequence of the application to them of the irritant, whatever it may be which originates this new action.

H. S. mate of the schooner Maryland, had a severe attack of bilious fever, June 1827, directly after leaving the port of Tampico.

In consequence of laying under the steerage hatch, on the night of June 27th, in a hard shower of rain, and high wind from the north-west, his left ear being exposed to their combined influence, the next morning he suffered severe pains in his ear and temple. He vomited almost incessantly for several days during the incipient stage of his fever, which afforded no relief to the ear-ache; but on the contrary, increased the paroxysms. Eventually he came under my care in the quarantine hospital, in a very reduced and feeble condition, and the pain in the ear was mitigated, and at last cured, by the repeated application of blisters behind the ear, and occasional purges.

Nevertheless, it is probable, that when the excretory ducts and vessels of the ear partake of the collapsing influence of cold, in common with the head; and soreness of the face, and stiffness of the cervical muscles, prevail in addition to the pains of the ear, relief may be procured by the nauseating effects of emetics, creating an increased excretion of the salivary glands, and Schneiderian membrane; and relaxing the extreme vessels in the meatus externus, and contiguous parts.

My practice is, when called upon to prescribe for otitis, where the general system and brain are not affected, to direct a purgative medicine, pediluvium of hot water, and cotton impregnated with the tincture of digitalis inserted into the ear. It has afforded according to my observation, ("cæteris paribus,") more alleviation than laudanum. But to depend upon that or any other medicine wholly, when the constitution is affected, would not be consonant to sound therapeutical views. The general symptoms, idiopathic and sympathetic, must not be neglected.

The following cases are offered in illustration of my views and practice, in this painful and sometimes dangerous affection.

Case I.—J. S., seaman, aged twenty-four years, a stout, robust man, slept on the deck of a vessel on the night of September 30th, 1823. The early part of the evening was clear and sultry; during the night the wind hauled round to north-west, and blew fresh for some time, and was followed by a hard shower. At daylight the thermometer was 47°. The rain awakened him, he went below and fell asleep in his wet clothes.

October 1st, P. M.—I was requested to visit him. Complained of a dull pain in his right ear, which had been exposed, considerable weight in his head, and indisposition to eat. ℞. Hydr. sub. mur.

gr. xx.; convol. jal. gr. xx. and a bandage of flannel to be bound round the ear.

2d.—The medicine operated copiously; passed a very restless night; pain in his ear sharp and lancinating, extending to the temples; pulse 96 a minute; tongue slightly furred. Venesection, ℥xx. R. Sulph. mag. ℥j. and apply a blister behind the ear. During the day experienced a little relief.

3d.—In great agony, and flighty all night. Pain in his ear continues sharp and cutting; pulse full and strong; very irritable. Venesection, ℥xx. Renew the epispastic, and give ol. ricin. ℥j. Tepid water to be injected into the external meatus. Symptoms much extenuated during the day. At night the pain returned with great severity. I dropped ten drops of the tincture of digitalis into his ear, placed in the meatus cotton impregnated with the tincture, and administered forty drops of laudanum.

4th.—Slept well the latter part of the night; entirely free from pain this morning. The disease was completely subdued, and he had no return of it.

Case II.—R. B. a shoemaker, aged thirty-one years, was engaged with a companion in a pugilistic affair on the 22d of February, 1825. During the fray his antagonist struck him on the left ear with a large stone, which, from the violence of the blow, terminated the conflict.

On the 25th, when I first saw him, complained of severe pain in his ear. It was tumefied, and the external meatus filled with coagulated blood. I ordered twenty leeches to be applied behind the ear. R. Sulph. mag. ℥j. and the coagulated blood washed away with warm water.

26th.—Pain in the ear excruciating, extending to the crown of the head, and stiffness of the cervical muscles. Venesection, ℥xij. R. Ol. ricin. ℥j. and a pediluvium of hot water.

27th.—Passed a very uncomfortable night. This morning flighty; incoherent in his observations; pulse 86. Venesection, ℥xvj. R. Ol. ricin. ℥j. and a common bread and milk poultice applied over the affected ear.

28th.—No better; pains lancinating through the ear and side of the face. Venesection, ℥xiv. A vesicatory behind the ear. R. Sulph. mag. ℥j. P. M. Much relieved.

March 1st. Passed a tolerable night; pain confined entirely to the ear, and throbbing; general excitement alleviated. Directed warm olive oil into the ear, a pediluvium of hot water, and the blister to be dressed with basilicon ointment.

2*d.* Pus discharged from the external meatus; violent symptoms all gone. Tepid water injected two or three times a day to carry off the pus. A moderate discharge continued for a few days, and then ceased; all constitutional irritation terminated.

A dull and heavy pain remained for sixteen days, which was meliorated, and eventually ceased, upon keeping cotton saturated with the tincture of digitalis in the ear.

I do not assert that the tincture of digitalis cured these cases; unquestionably much is to be attributed to the previous reduction of the phlogistic diathesis by venesection, &c. Relief, however, speedily followed the application of digitalis, especially in the first case. This medicine, it is notorious, has a direct and powerful sedative influence on the arterial system when taken into the stomach, and why may it not operate externally in a similar manner? My object, however, is to state facts, and not to theorize.

That digitalis reduces vascular action is indisputable. Some eminent physicians have confided so much in its sedative powers as even to make it a substitute for the lancet in the incipient stages of inflammation. Although this practice cannot be approved, there is strong reason to believe, that like opium, it has been excluded in cases of reduced arterial excitement, when prompt and permanent benefit would have succeeded its administration, both internally and externally.

That the capillaries of the part are always the seat of inflammation, is well established by Bichat, and the physician who has never seen a speedy reduction of topical inflammation by local remedies, after the failure of the most copious and general evacuations, has had a very limited experience, or been culpably negligent in his observations.

ART. VI. *On Gangrenous Erosion of the Cheek.* By SAMUEL WEBBER, M. D. of Charlestown, New Hampshire.

IN the American Medical Recorder, for July, 1827, there is a paper by Dr. JACKSON, of Northumberland, Pennsylvania, containing a number of cases, with remarks, of a disease of children, which he proposes to call Gangrænopsis, being the same called "Gangrenous Erosion of the Cheek," by BURNS and UNDERWOOD, in connexion with which Burns slightly notices, under the name of *Noma*, another and more destructive variety. The complaint, in its severer forms, ap-

pears to be one of rare occurrence, and is little noticed by medical writers. Milder instances of it, if I may judge from my own limited experience, are not very unusual, but are passed over without particular notice by physicians, in consequence of being considered merely as varieties of aphthous sore mouth with which children are frequently afflicted as a concomitant or sequel of other diseases, particularly bowel complaints. Still they agree so well in every respect, except severity, with Dr. Jackson's description, as well as that of the abovementioned writers, that I cannot but consider them as modifications of the same disease. It has been my fortune, in the course of two or three years, to meet with four instances, three of the milder kind, and one of the most severe form, answering to the *Noma* of Burns. These I am induced to make public, with the view of contributing any little in my power to the elucidation of a malady obscure in its nature, and which seemingly has attracted but little notice.

Case I.—I was requested to see a female child of about two years of age, on account as was stated of a bad sore mouth, which had lasted some days and resisted all common domestic remedies. I found her with the left cheek very much swelled, tense, shining, and white, with a slightly marbled appearance. The swelling on one side extended down on the throat over the submaxillary and sublingual glands, upwards to the eye, forward over the ala nasi of that side, and the whole of the upper lip. From the pain and soreness it was with difficulty I could get the child to open her mouth sufficiently to let me see any of the internal surface of the cheek, and my view was very imperfect. The gums and inside of the lips were swollen and aphthous. The swelling of the cheek seemed to project internally, so as to press between the teeth when they were separated, and on the centre of the swelling was a whitish spot about the size of a half dime, seemingly with raised edges and inflamed base. The secretion of saliva was profuse, so as to keep up an almost constant dribbling, and the breath had a peculiarly disagreeable smell, like that of putrefying animal matter. The child's general health did not seem much affected; she had previously been troubled with diarrhœa, which had however then ceased. There was a little appetite, but she was unwilling to take any thing but drink, apparently from the pain of swallowing. The tongue was furred, and there appeared to be a little febrile irritation, as if arising from the local disease. The treatment pursued was gargling and sponging the mouth, particularly the inside of the cheek, several times a day, with the following mixture. Muriatic acid, alcohol, āā. gut. xv.; water, ℥j. a little being swallowed more

diluted after each abstersion. A purgative of four grains each of calomel and rhubarb was given, at first every day, after two or three repetitions every second or third day, till the bowels appeared in good order and the tongue clean, after which rhubarb alone was given as a laxative till the cure was complete, which took place in about three weeks; the diet was of mucilaginous and farinaceous drinks at first, and afterwards of milk and cracker. The amendment was slow and gradual; the swelling subsiding, the salival discharge becoming less, the ulcer contracting, and the fœtor of the breath diminishing, till they finally disappeared.

Case II.—In August of the same year, 1827, a much slighter case occurred in a younger subject. This was a feeble child, of eighteen months old, who had suffered greatly all the preceding summer, first with hooping-cough, and then with frequent and troublesome diarrhœa. The general character was the same as in the preceding case, but the diseased appearances less strongly marked. The cheek was perceptibly but not greatly swelled, and the white spot as large as a small vest button. It gave way to infusion of *Statice limonium* with alum and honey as a local application, together with the internal use of cinchona and carbonate of soda, in infusion, for the general health.

Case III.—This occurred in the succeeding October, and followed a severe erysipelas of the right leg, beginning at the ankle, and extending to the groin before it was finally subdued, and arising from a slight scratch, as was supposed, from a bramble, on the inner ankle. The patient was a tolerably healthy girl of twelve years of age. In severity this case was about midway between the two before related, and yielded to similar local applications, with the use of light nourishing diet.

Case IV.—This happened in September, 1828, in a little girl ten years old. It ensued upon typhus, in which diarrhœa had been a troublesome symptom. About the fourteenth day, when the fever was apparently beginning to abate, she complained of a feeling of soreness and pain in the left cheek, not far from the angle of the mouth. The part was slightly swollen, somewhat hard and reddish, like the commencement of a boil. Volatile liniment with laudanum was applied, and the redness disappeared, though the swelling continued, being however less hard and rather more diffuse. A day or two after some aphthæ appeared in the mouth and fauces, for which a gargle of diluted muriatic acid was employed. She complained, however, of

the cheek's being hotter and sorer, and the swelling had evidently increased. On the inside of the cheek it protruded in a ridge between the teeth. Lead water was used externally as a constant application, in addition to the occasional use of the liniment above mentioned, and the inside of the mouth was frequently touched with honey acidulated with muriatic acid, small quantities of wine were given, and one-fourth of a grain of sulphate of quinine thrice a day, also small doses of Dover's powder to regulate the bowels, still rather too loose, and to procure sufficient rest. The cheek nevertheless continued to swell, and the breath became very fœtid with the odour before mentioned. The aphthæ nearly disappeared in a day or two, but upon the most prominent part of the internal swelling of the cheek was a kind of flabby pustule or blister, seemingly beneath the whole thickness of the internal integument, which over the swelling was opaque and of a dirty white colour. This broke the same evening, discharging a small quantity of fœtid fluid, and leaving a sloughing appearance of its membranous covering. It was repeatedly touched during the night and the following day with a strong preparation of muriatic acid and honey, sufficiently caustic to corrugate the sloughing membrane and make it settle down below the level of the surrounding parts. This it was hoped would put a check to the diseased action, and cause the slough to separate. Notwithstanding, it continued to increase during the subsequent night, and on the next morning had nearly reached the angle of the mouth, which looked dusky, cracked, and approaching to a state of gangrene. An eminent practitioner from a distance met me in consultation this morning, and advised carrot and fermenting poultices with charcoal over the cheek, a small blister externally across the angle of the mouth, and one on the inside of the cheek, of a size sufficient to cover the slough and the surrounding sound edges, while the internal remedies were continued in increased doses. The disease however proceeded with redoubled rapidity. Gangrene in undisguised blackness passed in a few hours across the external blister, and at the same time came through the cheek opposite to the point on the inside first attacked. In spite of the assiduous application of fermenting poultices with charcoal, these spots spread so as to coalesce in the course of the night, and by next morning to involve most of the unattached portion of the cheek. The case was now deemed hopeless and dissolution was soon expected. The fœtor being excessive, with a view to lessen it, the part was covered with a cloth wet with a solution of chloride of lime, (bleaching powder.) This also lessened the rapid spreading of the gangrene so much, that for hours it seemed almost entirely stationary, but did not be-

come wholly so, though it went forward very slowly, till it had covered the whole of the swelling existing at the time of its commencement, reaching almost to the lower eyelid, over the membranous part of the nose on the same side, the septum, two-thirds of the lips, and half of the chin, including all the cheek to below the under edge of the lower jaw, and backwards nearly to the ear.

The parts were completely sphacelated, and had nearly separated, when at the expiration of twelve days from the first appearance of danger, the little patient died, completely exhausted. All the peculiar symptoms of the fever had entirely subsided, long before her death.

Charlestown, N. H. August, 1827.

ART. VII. *Remarks on the Climate and Vegetation of the Fortieth Degree of North Latitude.* By RICHARD SEXTON, M. D. of Baltimore, Maryland.

EASTWARD from the most elevated ridge of the Allegany mountains, the fortieth degree of latitude embraces land for the distance of about two hundred and fifty miles, comprehending a portion of each of the states of New Jersey, Pennsylvania, Delaware, Maryland, and Virginia. This extensive territory comprises three well defined natural divisions: one, situate east of the falls of the rivers, is known by the name of the low country; another, placed between the low country and the foot of the mountains, is denominated the high or hilly country; and the third is recognized in the mountains themselves.

The low country within the fortieth degree, is remarkable for the levelness of its surface; being, indeed, chiefly a plain, the undulations of which rarely attain the height of eighty or one hundred feet above the water in the rivers. The tide traverses the whole of this division, and the streams either partially or wholly contained within it generally diverge into wide, and, when compared with their breadth, shallow expanses of water. The line bounding the low country by passing through the most eastern falls in the rivers, commences near Philadelphia, on the Schuylkill, and thence tends toward the southwest; being found on the Susquehanna at Port Deposit, on the Patapsco west of Baltimore, and on the Potomac at a short distance above Washington. In soil, the low country is generally sandy and unfertile, being indeed in some places quite sterile, though productive dis-

tricts are interspersed throughout the division, and particularly along the borders of the streams.

West of the low country, the surface immediately runs into hills, the summits of which are elevated from four hundred to one thousand feet above the range of the tide. Here the soil is frequently rocky or stony, and whilst the eminences are barren, the vallies are famed for their fertility. This hilly tract measures, in a western direction, from thirty to ninety miles, ending at the Conewago and Monocasy, which rivers meander along the foot of the mountains. The various ridges of the Alleghany chain, ascend, in this latitude, to the height of from one thousand five hundred to three thousand three hundred feet over the plane of the Atlantic.

Forests are universally acknowledged to exert a powerful influence on the climate of a region. By embracing in one view the three divisions just described, we presume that the trees and shrubs which originally shadowed almost the whole surface, will be perceived to cover at present less than one-half of it. In the low country, two-thirds of the soil without doubt are cleared and under cultivation, whilst the mountains, both from the nature of their surface, a portion only of which will admit of tillage, and from the paucity of their inhabitants, have undergone but a small change from their primitive condition.

To these prefatory remarks we may add, that since difference in altitude will always cause a variance in meteorological phenomena, each of the natural divisions of the territory under consideration, must, consequently, exhibit certain features of climate peculiar to itself. The general temperature of the atmosphere, is, of course, greatest on the low country, and least on the mountains. On the latter, the weather is generally similar to that which occurs along the sea-coast, two and three degrees to the north. Within one degree of latitude, however, little other variation can be detected in the aerial phenomena, than that produced by diversity of elevation, or that effected by dissimilarity of surrounding surface.

The four seasons attributed to regions in the temperate zones, are well defined in the fortieth degree. Each season nearly or quite occupies its proportionate part of the year. The spring is recognized in March, April, and May, by a steady and gradual increase of the temperature, which averages for the whole period about 54°, and developes the foliage of the whole vegetable kingdom. The summer, evidenced by the extreme heats of the climate, follows in June, July, and August, which months possess a mean temperature of 74° to 75°.

The autumn is marked in the three succeeding months by the gradual decline of the heat, so that its average becomes about 56°, and by the slow but complete extinction of deciduous vegetable life. The winter, following in December, January, and February, with its train of snows and frosts, offers a mean temperature as low as 35° or 33°. Allusion is here made to the seasons in the low country, to which division all other remarks are to be considered applicable, without the contrary is expressed.

It were a perfection in the climate of any region did the atmospheric phenomena always progress in some regular manner, since all those numerous transactions in society which are more or less influenced by them, could, in that case, be executed with a greater probability of success; and human life itself, constantly jeopardized and destroyed from ignorance of future weather and temperature, would be held under a less precarious tenure. The climate of no part of a temperate zone, however, is distinguished by such regularity. In this latitude, where the weather is noted for a peculiar inconstancy, we scarcely hope for a similarity in the seasons of two successive years, as experience proves that the same season is constantly varying in its heat, in the quantity of moisture, and in the number, suddenness, and excess of its vicissitudes. The first effects which the vernal atmosphere produces on vegetables, are usually perceived in the first or second week of March, by greenness commencing on the earlier developing plants. The severe frosts, to which March is obnoxious, nip these early productions, and the month altogether is too cold for a hasty vegetation. But in April, the unfolding of leaves and flowers advances speedily, and after this month meets with no interruption. The range of the dates at which vegetation commences is very wide. February sometimes adorns the fields with the verdure of their miscellaneous plants. In 1824, the pastures appeared green in January, whilst sprouts two inches in length protruded from the common elder, *(Sambucus nigra,)* and similar untimely appearances are recorded of January, 1828. On the other hand, all the deciduous organization has been observed locked fast within the bud, until the concluding days of March.*

A period of note in the progress of the year, is that of the display of the blossoms on the fruit and forest trees. The former commonly flower in April, and the latter at the end of the same month, and in

* This was the case in the spring of the present year, 1829. We here remark, that all the facts it is found necessary to relate, were obtained either from our own observation, or from authority of unquestionable accuracy.

May. The range in the dates at which, in a series of years, any kind of tree commences to bloom, measures in length in an inverse ratio to the quantity of heat necessary to effect this expansion on it. Thus, during the last nine years, the dates of the blossoming of the peach tree include one month, whilst those of the Liriodendron but eleven or twelve days. The peach tree, in 1808, was noticed in the precincts and neighbourhood of Baltimore, covered with flowers on the 28th of February; and in 1828, the same development recurred in the south of New Jersey, during the first week of March; but in 1821, this tree did not blossom until the 29th of April. These dates are offered as the extremes of the period during which efflorescence commences on this extensively cultivated fruit-tree.

The idea of a vernal season is habitually associated with those of a mild temperature and a serene sky, and although an inhabitant of this latitude may occasionally in the spring enjoy the reality of this poetic combination, yet the facts fail to distinguish the chief part of the weather of the season. The atmosphere during March and April, and frequently during May also, is excessively variable in its temperature and perceptible moisture, whilst chilling and wet weather occupy a considerable portion of the time. This character of the spring is principally obtained from the extensive sweep taken by the prevalent winds: the south-west brings the air from the tropic, and even from near the equinoctial line;* the north-west comes forth from regions beyond the mountains and lakes, where the snow and ice are as yet undissolved; and the north-east arrives from the seas about Newfoundland, which at this time in the year are covered with a cold atmosphere, remarkably surcharged with moisture. The change of one of these winds for another, will cause the temperature of one day to differ 20° or 25° from that of the preceding, and the north-west following the south-west often effects a sinking of the mercury 28° or 30°; as much sometimes as 35° between an afternoon and the following morning. Such depressions in the thermometer, which before the middle of April ranges commonly between 40° and 60°, and rises but on a few days to 65° or 70°, must consequently at times effect a congelation of the water in the atmosphere and on the ground: less or more of snow and ice is indeed always expected in March. In the last ten years there are recorded three instances of deep snow in April. The first is on the 14th of this month, in 1828, when the earth about the city of Philadelphia was covered six or seven inches deep, and sleighs ran for some hours on the highways. The second

* See Volney's View of the Soil and Climate of the United States.

instance is on the 3d of April, 1825. In the third instance, which occurred in the first week of April, 1820, the snow, which fell to the depth of five and six inches, remained on the ground in places for more than a week, whilst the cold succeeding the storm was sufficiently intense, on two mornings, to depress the mercury to 18°.* By the same event, the mountains were covered a foot and a half in depth. In the year 1803, the ground was concealed by a fall of snow, on the 8th day of May. At this advanced date, the production of snow must, without doubt, be analogous to that of the hail frequently falling in the middle states in May and June, and to that of the sudden precipitation of water, attended with lightning and thunder, common to the whole warmer portion of the year. The latter phenomena are indisputably the effect of irruptions of cold currents, from the higher regions of the atmosphere into the warmer and moister stratum of air, lying next the surface of the earth.

April forms the customary limit to frost. During the first ten days we usually observe the last instances of a freezing temperature. In an occasional year, the north-west winds will depress the mercury to 29°, and 28°, as late as the twentieth; and ice on small shallow pools, which may be formed, according to Jefferson, with a morning temperature as high as 38½° will be noticed in the first part of May. It is the occurrence of frost after the blossoming of the fruit trees, that renders a profitable cultivation of them so uncertain. To failure in the production of their fruit from this cause, the apricot, the species of *Amygdalis*, and their varieties, are especially liable: but, it is a curious fact, that the fortieth degree is more propitious to the cultivation of these fruits, than the latitudes adjoining on the south, for in them the trees blossom earlier, whilst the severity of the frosts of April and May appears to be very slightly diminished.†

The extreme heats of the climate usually commence in the beginning of June. During this month, July, and August, the daily fluc-

* Since the thermometer is affected variously in different situations, it is necessary to state, that throughout this paper wherever reference is made to the indication of the instrument, its position invariably was in the open air, eight, twelve, or fifteen feet above the ground, where it was freely exposed to the wind, and in the middle parts of the day surrounded by an extensive shade. Without a particular hour of observation is specified, but two kinds of temperature are ever alluded to; the minimum and the maximum of each twenty-four hours.

† At Richmond, Virginia, on the 25th of April, 1823, tubs of water exposed through the night were found frozen over. This city is in the latitude of 37½°.

tuation of the mercury is customarily embraced by points between the sixty-fifth and eighty-fifth degree: and, on averaging the highest temperatures of the whole number of days, there will commonly be obtained a result of from 80° to 82°. May and September, with the summer months, contain all the hot weather; and when these important five months exhibit ordinary warmth, they include sixty or seventy days, with a heat in the afternoon as great as 80° or more.

The coolest summers are almost always those that are most rainy. Their coolness obviously results from the frequent communication of the temperature of the higher,* to the lower strata of the atmosphere, by the descent of the rain, from the subsequent evaporation of the water, and from the frequent canopy of cloud, which prevents the earth from receiving its usual amount of heat from the sun. The summer of 1814 is memorable for uncommon wetness; and its coolness was proportionate, since, according to a statement in the Medical Recorder, of 1818, the mean heat, at 3 P. M., of June, July, and August, collectively, was lower in 1814, than in any other year, from 1793, to that of the date of the publication. Coolness throughout a summer is, however, occasionally attended by dryness, as was instanced in 1816. During a considerable part of the remarkable summer of this year, a haze was diffused in apparently the superior regions of the atmosphere; and which at times intercepted so many of the sun's rays, that he could be attentively viewed without inconvenience to the eye. What subjected this phenomenon to general remark, was, that the sun's disc, at a part of the time, contained several dark spots, which, being visible without the aid of glasses, excited universal attention. White frost was observed on five successive mornings, terminating on that of the 11th of June; also on the 21st of the same month, and even in the first week of July. At the latter part of August the ground was again sprinkled with frost; the mercury having fallen to 46°. Many districts suffered by drought during this summer; and the frosts of June, with the general coolness of the season, were so unfavourable to the maize, that in some places not half the usual crop was produced: the later ripening varieties failing entirely to mature.

The most intense heats of the summer are designated on the thermometer by 90, 93, 96, 98, and 100 degrees. The mercury arrives

* On the morning of the 4th of May, 1827, frost and ice were observed, and the tender garden plants were quite destroyed, even as far south as at Cheraw, in South Carolina.

among these points, on at least three or four days of every summer, and in some seasons on ten or fifteen days. The frequency of the elevation to these extremes is not always proportionate to the general temperature of the season.

Among the summers of the present century, those of 1819 and 1827, are the most distinguished for extreme heat. We are informed from the observations of Mr. BRANTZ,* that during the five warm months of the former year, the mercury, even as early in the afternoon as at two o'clock, stood at or over 80° on eighty-one days; on thirty-three of which number the temperature exceeded 89°.

In 1827, from the first of May to the 30th of September, the thermometer rose to or over 80° on ninety days. Twenty-two of these exhibited the instrument above 89°. The extraordinary heats of 99° and 100° were indicated in all cool out-door situations, on the 5th and 6th of August.

The higher situations on the mountains are never visited by heats of that intensity, remarkable in those experienced on the plains. Invalids and fashionables, who, in the summer, retire to Bedford, situate near the most elevated ridge of the Alleghany chain, find thick clothing, with fires in the mornings and evenings, necessary to their comfort in July and August. White frost is occasional in these months, and even ice has been gathered from small pools of water in July.

The autumn is, to the majority of the population of this parallel, the most agreeable of the seasons. During the latter part of September, and quite the whole of October, the weather is most commonly serene, and the temperature usually remains in that condition which neither produces a sensation of unpleasant warmth, nor, to the healthy, sufficient coldness to render fires necessary for their comfort. This period has been declared by Americans of observation, who have spent years in Italy and southern France, to excel the most pleasant seasons of those countries, so famed for the beauty of their climates. Slight white frosts are noticed on low grounds in the latter half of September, and general white frosts, caused by a morning temperature of 42° and 40°, appear in the first ten days of October. These expedite the change and fall of the leaf on the delicate forest trees, though they injure but slightly the verdure of the hardy trees, and that of the tender field and garden plants, as all these vegetate

* This gentleman has recorded the meteorology of several years. His very accurate and instructive observations were published, in monthly tables, in the Baltimore Gazette.

until the latter part of October, when a series of heavy frosts, produced under a temperature near or below the freezing point, destroys almost the whole of the deciduous vegetation.*

The variation in the dates of the occurrence, and in the severity of the first autumnal frosts, is considerable. September sometimes passes away without a temperature lower than 50°, which is a depression scarcely great enough to effect the slightest congelation of the dew. In 1822, the tobacco, palma christi, and plants of a similar tenderness, were seen in open places, but little injured, as late as on the 25th of November. In 1823, on the contrary, the same plants were destroyed in the last week of September. But although we view occasional irregularities in the weather of the autumn, it is, nevertheless, distinguished in successive years by a greater similarity in its meteorology than appertains to any other season.

The winter is characterized by excessive variability. This portion of the year consists entirely of a continued alternation of snow and severe frost, with storm, rain, and occasional temperate and serene weather. The average heat of any of the months, when compared with that of the same month in another year, may be found to differ 20°, or even more, and the more remarkable phenomena of the season, the ice and snow, constantly vary in different years, both in their quantity and in their duration.

The falls of snow are commonly under six inches in depth, and they occur at five, seven, or ten times during the three winter months. It is unusual to see the surface of the ground entirely or nearly covered with this emblem of the season for more than a week at once, for the sun, with a clear sky, dissolves it in open places, whenever the temperature of the air rises even near to the freezing point. But, in some years, falls of snow happening in quick succession will keep the surface in exposed places, if they be level, quite covered from three to five weeks together. Thus, in 1817, the snow lay from two to six and eight inches deep, from the 19th of January to about the same date in February, and in 1820, the surface was hidden by it during nearly the whole of January. In the winter of 1820–21, snow concealed the ground, with the exception of a few of the eminences, from the 26th of December to the first week of February, and at a part of the time measured, on a level, eighteen inches in depth.

* Similar to the course of the late frosts in the spring, the early frosts of the autumn extend themselves far to the southward. The first and only ice that was made at Baltimore, in October, 1827, was formed, one-tenth of an inch in thickness, on the 27th of the month. At the same date, as the public prints informed us, ice as thick as a dollar, was noticed at Charleston, South Carolina.

As instances of that class of winters which are most deficient of snow, may be offered these seasons in 1825–26 and 1827–28. In the former, snow fell but once, to remain on the ground more than a day; its depth was then four inches, and it had disappeared in a week after its fall. No snow was perceived on the ground, either in the preceding autumn or in the following spring. During the months of December, January, and February, 1827–28, snow was noticed on the earth but thrice, and the surface was never covered for twenty-four hours together.

The following is a statement of the extreme depression of the mercury in the last thirteen winters. One fact relative to the extremities of the temperature of this climate may here be remarked. In the last thirteen years, the degree of the greatest heat of each summer has occurred within the space of 8°, whereas the degree of the greatest cold of each winter has fluctuated among 27°, as the succeeding table evinces.

1816–17,	— 4°	in February.	
1817–18,	— 2	on the 10th of Feb.	
1818–19,	. . 5	on the 18th of Dec.	
1819–20,	— 2	on the 1st of Jan.	
1820–21,	—11	in January.	
1821–22,	. . 1	on the 5th of Jan.	
1822–23,	. . 6	in February.	
1823–24,	. . 8°	on the 5th of Feb.	
1824–25,	. . 9	on the 4th of Feb.	
1825–26,	. . 4	on the 1st of Feb.	
1826–27,	. . 4	on the 28th of Dec.	
1827–28,	. . 16	on the 22d of Jan.	
1828–29,	. . 11	in Jan. and Feb.	

In conclusion of these remarks on the course and variations of the seasons, we adduce the mean temperatures of the chief part of the months of six late years. The two columns of observations, formed from noting the minimum and maximum temperatures of every day, were added up at the end of the month, and the amounts divided by the number of their respective observations. From averaging two results formed by this method, each of the numbers which follow were obtained.

YEARS.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
1823	33.3°	27.5°	39.7°	54.2°	62.7°	70.2°	75.6°					
1824	36.3	34.2	40.4	52.6	62.2	71.8	77.2	74.5°	66.0°	57.1°	46.3°	40.1°
1825	36.	36.6	45.8	53.	62.7	75.1	79.1	73.8	66.6			33.8
1826	34.2	36.9	45.3	50.1	70.2	75.2	77.3					
1827	30.4	40.9	46.7	59.6	65.5	72.	78.3	76.8	66.1	56.3	42.	41.5
1828	37.6	43.7										

That an important change has taken place in the climate of this latitude since the early periods of its settlement by Europeans, will not at present admit of dispute, although fifty or sixty years back,

when the opinion was first agitated, there were many who did not give it credence. The meteorological history of the last twenty or twenty-five years is quite deficient of those relations of long-continued cold, and deep and durable snows, which are recorded in close succession in the histories of the last century. A similar amelioration in the temperature of the colder portion of the year has happened in all the higher latitudes, when the countries which they traverse had become thickly peopled, and their soils had been subdued to a correspondent cultivation. It is now no longer doubted but that clearing the surface of the forests produces this effect. The ground being freely exposed to the rays of the sun, by the destruction of the shrubs and trees, becomes in consequence more intensely heated, and its incumbent air is immediately supplied with a greater quantity of caloric, for the earth is the grand reservoir whence the atmosphere receives its warmth. By this simple and readily explicable process, Italy and France now afford a congenial atmosphere to the orange and the olive, where the winters, one thousand eight hundred years ago, exhibited the rivers bound with ice, and the earth deeply and permanently covered with snow.

The more remarkable particulars of the change, which the climate of this latitude has undergone, appear to be as follow:—1st, the wind is more variable; 2nd, the winds from the western semicircle have declined in number; 3rd, snow and ice are formed in smaller quantities, and are less durable, and the general temperature of the winters has increased.

1st. On referring to the causes, which are known to influence the motions of the atmosphere, the conclusion is obvious, that the aerial currents would move with less regularity and steadiness, after large portions of surface, cleared and thereby rendered disproportionately hot, had become new powers in effecting motion in the atmosphere, than when acted on solely by those causes, which permanently belong to the continent. There are but few facts preserved from the oblivion of former ages, which relate to this subject. A late volume of the Transactions of the American Philosophical Society, contains the translation of the diary of a Swedish clergyman, who noted the courses of the wind on the Delaware, in the seventeenth century. I have not the work now before me, but from recollection, I state, that the tenacity of the wind to a few neighbouring points of the compass, as described by the Reverend observer, far exceeds that exhibited in journals of the winds of present years.

The Swedish professor, Kalm, who travelled in North America, in the years 1748 and 1749, has formed some valuable records of its

climate. In his register of the courses of the winds at Philadelphia, and at a situation in New Jersey a few miles southward of that city, we find the currents occasionally flowing from three or four adjacent points of the compass, for five and seven days together: and, in the tabular observations of the celebrated Bartram, which were taken in the summer and autumn of 1749, and are appended to the work of Kalm, the wind is marked at several times to have blown from one direction five or six days in succession, and once, in the latter part of July, from the west for the space of eleven days. But the inconstancy of those winds of longest continuance, the N. W., N. E. and S. W. is now so increased, that, allowing to each an eighth part of the circle for its vacillancy, its duration is rarely over two and three days. Tables of the winds for five years, offer not a single instance, when currents from within any eighth part of the compass, existed more than five days together.

2nd. Jefferson, in his Notes on Virginia, remarks relative to the east and south-east breezes, which commence in the afternoons, of the warm months especially, "that they have advanced into the country very sensibly, within the memory of people now living, as they formerly did not penetrate far above Williamsburg, but are now, (1782,) frequent at Richmond, and occasionally reach the mountains." There is no reason to suppose, that this increase of the easterly winds was the effect of any other cause than the cultivation of the soil; from which similar changes in the motions of the atmosphere has doubtless been produced in the whole maritime region, at least of the middle latitudes of the United States.

Dr. Williamson, writing in 1770, observes, "that seamen, who are deeply interested in the subject, informs us, that in the winter season they have been beating off our coast, three, four, or five weeks, not being able to put in by reason of the north-westers: they are now seldom kept off twice that number of days."*

In the ten months, between the first days of August, 1748, and June, 1749, Professor Kalm has recorded four hundred and seventeen observations on the course of the wind. Of these, forty-six are marked with the cardinal points N. and S.: of the remaining three hundred and seventy-one, two hundred and seventy-three, or three-fourths, are on winds from the western, and ninty-eight, or one-fourth, on those from the eastern semicircle. Easterly and westerly winds occupy, at the present time, each about the same number of days in the year. Hence, we infer, that the decline of the westerly winds in eighty

* Transactions of the American Philosophical Society, Vol. I.

years, equals one-third of their number at the commencement of that time.

The greater frequency of the winds of the eastern semicircle, most of which receive the abundant evaporation from the Gulph stream, may be offered as a sufficient explanation for that increased dampness in our atmosphere which has been noticed by Dr. Rush and others.

3rd. All accounts concur in the assertion, that for many years after the first settlement of the middle colonies, the earth, in this latitude, was partly or entirely covered with snow for three or four months annually. Forty or fifty years ago, when the decline of this conspicuous phenomenon of the winter had become a subject of general remark, the usual depth of the snow, in this season, was according to Rush, from six to nine inches, though sometimes between two and three feet: and, in uncleared districts, it occasionally lay until the first week of April.

We are informed by the same author, that in the year 1740, the river Delaware was crossed on the ice in sleighs at Philadelphia, on the 16th of March, and that the navigation to that port, did not open until the 24th of the same month, and that in the winter of 1779–80, this river was frozen across, at the same place, for nearly three months. In the year 1705, snow is related to have fallen a yard in depth. During the winter of 1697–98, the Delaware was passable on the ice for sledges below Christiana creek; and the author, from whose work this fact is extracted, also states, that the same river is *seldom* frozen across at Newcastle.* Messrs. Mason and Dixon, whilst engaged in astronomical observations, about thirty miles west of Philadelphia, in the month of January, 1767, saw the mercury, in the open air, fall to 22° below zero. In the winter of 1783–84, the snow lay in many places in the south-eastern part of Pennsylvania, from two to three feet deep during the chief part of the season, and all the rivers, which were frozen up in December, continued bound until the middle of March, with the exception of a short time in January, when the ice was broken, but not destroyed. These are a few of the many instances to be gathered from history, which testify to that abundance of snow, and durability of cold, which, if not constant, was formerly very frequent in a series of winters in this latitude.

The season of 1820–21, exhibited more intense cold, and deeper snow, than any other winter of the last twenty or twenty-five years, and, probably, than any other within the present century. The navi-

* Kalm's travels, Vol. I.

gation to the cities of Baltimore and Philadelphia, was closed from the 24th of December, to the 16th of February, a space of nearly eight weeks. A north-east storm on the 6th of January, buried the surface fourteen and sixteen inches deep with snow. The same month contained the whole of the very intense cold of the season. The mercury was observed below zero on three mornings: yet one circumstance is remarkable in comparing the temperature of January of 1820–21, with that of the same month in 1779–80: in the latter, the mercury, according to Rush, rose to the freezing point but on one day, whereas in the former, fourteen days are marked by Mr. Brantz above that point. The river Delaware was frozen over, in this winter, for twenty or twenty-five miles below Philadelphia.

There are handed down to us, however, a few memorable instances in ancient winters, when a remarkable mildness usurped the place of their customary severity. Swedish records state, that flowers were seen in the woods in February, 1714.* In or about the year 1756, apple trees were noticed in full bloom, and bearing young fruit, in December. But we are assured, from the unanimous assertion of aged persons, as well as from the Indian adage, "winter never remains in the sky," a conclusion founded of course on long experience, that such untimely mildness, was either preceded or followed by a full measure of wintry severity.

The extreme degree of cold to which the fortieth degree is liable, is, perhaps, still as great as it was one hundred years or more ago. This extremity attends north-western winds, and according to the received opinion, that increase of the general temperature, follows solely from the clearance of the surface, since the countries north-west of the lakes, have not undergone such a change, the atmosphere cannot have been altered in temperature at their sources. And, although in passing to the sea, the cultivation which the mountains and lands eastward have received, may usually mitigate the coldness of these winds, yet, they must disseminate their original temperature along the sea-coast, whenever they are of long duration, whilst the country over which they proceed, is continuously covered with snow: for snow receives but little heat from the rays of the sun, whilst it refuses to conduct the caloric of the soil beneath. Within this century, the mercury has been seen at 14½° below zero, in the hilly country, a few miles from Philadelphia, and at 11° below the same mark,

* Some plants require but a low temperature for the production of their blossoms. The red maple flowers at almost the commencement of the vegetating season: as also Pothos fœtida, Sanguinaria canadensis, Anemone nemorosa, and many others.

in the immediate neighbourhood of that city. But there will doubtless be an amelioration in this particular, when Canada and the United States shall become thickly peopled, and generally cultivated: in this latitude, then, like the same parallel in Europe at present, snow and ice will become rare phenomena, and the orange, the olive, and other vegetables of the same class, now strangers to the soil, will become objects of the labour and solicitude of the agriculturist.

Baltimore, August, 1829.

ART. VIII. *Case of Disease of the Bones successfully treated by the Internal Exhibition of Arsenic.* By JOHN HENDERSON, M. D. President of the Huntingdon County Medical Society. (Published by request of the Society.)

ON the 10th of June, 1818, Miss Martha M'Elheny, aged seventeen years, was brought to Huntingdon, by her friends, in this neighbourhood, with a view of obtaining my advice and assistance in a deplorable affection of the bones. On enquiry, I learned that the disease was first noticed about eighteen months before, when two tumours were observed, of the size of a nutmeg, about the middle of the radius of the left arm; that these soon ulcerated, and from them nine spiculæ of bone were thrown off at different times; and that others were forming on other parts. For the removal of these tumours, she had placed herself under the care of a respectable neighbouring physician, who put her under a severe mercurial course, and continued the salivation for near two months; which reduced her so low that, (to use her own expression,) "she could not raise her hand," with no other good effect, than that, during the mercurial action, the disease was kept at bay. Her debilitated situation precluded any further trial of the medicine, and the treatment was abandoned, after which the disease resumed its course, and she was left to her fate. As soon afterwards as she had regained sufficient strength to bear a ride of a few miles, she was brought to me.

She was then labouring under extreme debility; countenance very pallid; dyspnœa and palpitation of the heart, to a distressing degree, upon the slightest exertion; constant irritative fever with night sweats; the catamenial discharge had never appeared. Her father and mother's family had been remarkably healthy, no scrofulous or other hereditary disease had ever appeared in either of them, as far as

could be ascertained. Osseous tumefactions, of an oval form about the size of a small plum, had been formed around the second phalanges of two of the fingers and thumb of the left hand, as well as on three of the right. The fingers appeared as if they had been inserted through the tumours, (which were of a pale white colour,) retaining their usual size immediately above and below them. The toes and metatarsal bones of each foot were similarly affected, and there were deep ulcerations of the ossa calcis and ankle joints, one os mala, one of the spinous processes of a dorsal vertebra, and one os femur and tibia also partook of the disease, and from all that were ulcerated there exuded a very fœtid sanies, containing occasionally small pieces of bone.

Previous to this period I had met with but one case of an osteo-sarcomatous character, appearing to affect the whole osseous system; this was in the first year of my practice as a physician, and occurred in the neighbourhood of Chambersburg, in a child of Mr. Samuel Nicholson, about one year old. It being a disease entirely new to me, I requested the father of the child to obtain the advice of Dr. Physick, and I would carry his prescriptions into effect. Dr. Physick directed a small portion of the oxymuriate of mercury, in solution, to be given to the child daily, with a well-regulated diet; but upon a fair trial, even with very minute doses, we found that the stomach and intestines of the child would not bear the medicine, it bringing on distressing vomiting and dysenteric symptoms, to an alarming degree. It was then laid aside, and the child left to the operation of nature. In a few months the bones of the toes, as well as those of the fingers, separated and fell off, the ankle joints were dislocated, and it sunk under the disease.

This case, of course, showed no safe precedent by which I could be guided in the present one; neither had I ever met with a similar one in the course of my reading, (which I must acknowledge has not been sufficiently extensive,) that had been relieved by the internal use of medicine! It is true, I had met in my own practice, and also found in our books, a number of cases of a local nature, generally depending on local injury, in which amputation was the only remedy that held out a chance of relief; but when tumour after tumour arises in succsion on various parts of the osseous frame, involving so many bones, as in the present case, shall we remain spectators of the ruin of joint after joint, and calmly view its inevitable tendency to the destruction of the sufferer, without making a powerful effort to arrest its progress? But, on the contrary, ought we not for that purpose rather push to the fullest extent any remedy that holds out the least pros-

pect of relief? Here was a constitutional disease, a general affection of the whole osseous system, and requiring general internal remedies to correct it, and I was left alone to judge of what those remedies should consist.

From the effect of the mercury formerly given in arresting the progress of the disease for a time, and the idea I then entertained of its substituting its own peculiar action for that of the disease, until a more healthy one should be resumed by the system, and the inability to bear it for a sufficient length of time to accomplish this purpose, I was induced to turn my attention to the selection of a medicine of the tonic class, whose action could be kept up, if properly administered, to an indefinite length of time; and I accordingly fixed on the white oxide of arsenic. With the use of this medicine I had long been familiar, in cutaneous affections, chronic rheumatism, scrofulous ulcers, and diseases of the intermitting form, and well knew that under proper regulation it could be so administered as to run no risk of the constitution being injured by a judicious application of it. The preparation I used was a saturated solution, made by boiling any quantity of the oxide in common water, in a Florence flask, for fifteen or twenty minutes, and after it had subsided, and the solution become clear, it was fit for use. I commenced giving it in doses of five drops, combined with a little camphorated tincture of opium, three times a day; but, least it should not be sufficiently expeditious in its effects, I also gave in conjunction with it, for a few weeks, a vinous tincture of cinchona, and the red oxide of iron; however, the latter was soon laid aside, as being deemed unnecessary, and the arsenic alone depended on.

After the medicine had been taken about three months, the tumours that had not ulcerated ceased to enlarge; and those that were open began to close up; and many appeared to be entirely healed; when my patient was unfortunately seized with the hooping-cough, attended with severe pulmonary affection, which forced me to lay aside my medicine, until the new disease should be overcome; a period of nearly two month; when I found that all my previous exertions had been to little or no purpose, as the ulcers by this time had all opened out anew, and my patient nearly as ill as when I first prescribed for her. However, I had the satisfaction to know that I possessed a remedy at hand sufficiently powerful to controul, if not to eradicate the disease entirely, and with confidence entered on its use a second time. In my calculation, I was not disappointed, but soon found it producing its former salutary effect. I now gave positive instructions that on no account whatever, should it be laid aside; and fortunately no

accident occurred to interrupt us in its further use. From this time all went on well; no new tumours were found; those already existing ceased to increase; and the open ulcers often throwing off some loose bone, soon healed. In about six months after resuming the medicine, the menses made their appearance; the disease seemed to be completely overcome, and I considered the cure confirmed; but through fear of a return, my patient of her own accord, continued long afterwards to take the medicine, which had now become so pleasant a stimulant, that she compared its effect on the stomach to that produced by a small portion of spirituous liquor. It always gave her an appetite for food, in which she was not restricted, but allowed whatever was most agreeable; no unpleasant effect whatever occurred at any time from its use, but the quantity could never be increased beyond five drops, without producing vomiting, and long afterwards, on trial, two drops were found to produce the same effect.

In November, 1819, a large collection of fluid was discovered high up in the muscles of the right thigh, which, by pressure, could nearly all be forced into the pelvis; no pain attended it; I believed it to be produced by an ulcerated state of some inner part of the os ileum, and it yielded to blistering, camphorated volatile liniment, and a roller.

The medicine was regularly taken, three times a day, (with the exception of the time that the hooping-cough prevailed,) from the 10th of June, 1818, to the 1st of November, 1819, and my patient has been ever since, as healthy as she or her best friends could wish.

ART. IX. *On the Rhus glabrum as a Remedy for Ptyalism.* By WILLIAM M. FAHNESTOCK, M. D.

WE are not fond of encumbering the materia medica with inert articles, nor do we feel ambitious of introducing new remedies, but yet it is not proper to reject a new substance without an impartial experiment, and particularly when one of gentle operation is proposed as a substitute for those of more irritating qualities.

The medications in use to check inordinate and protracted salivation, are all of a highly stimulating, astringent, and often corrosive nature, as borax, myrrh, bark, alum, nitric acid, &c. which seldom fail to aggravate the sufferings, and create deeper seated irritations. Having seen very alarming, and even fatal effects, from salivation

and the remedies employed to controul it, our attention was directed to the use of the gentle astringents, as common green tea, &c. and finding much advantage from them, the experiments were continued to the milder articles, as the elm, sassafras, and sumach; from the latter we derived peculiar benefit, and have continued to use it with uniform and unparalleled success.

The first case to which it was applied under our observation, was a patient who had been treated with mercury, both internally and externally, for typhoid pneumonia, and which affected the system to the most distressing extreme. The face and eyes were very much swollen; the tongue enlarged and protruded, the internal surface of the mouth denuded, and the fauces in ulcers. A lukewarm gargle of the inner bark of the root of the smooth Pennsylvania sumach was ordered to be used every fifteen minutes, and mucilaginous drinks enjoined: relief was soon experienced, and in a few days the irritation was entirely removed.

The second case we shall mention, was a girl of nine years of age, who, for an attack of simple remitting fever, had the mercury exhibited so as to produce profuse salivation, which resisted all the irritating compounds of borax, myrrh, &c. and continued until it had effected anchyloses of the jaw, extensive caries of the upper maxillary bone, and sloughing of the cheek. She was now put under the care of a second physician, who, after a short time, abandoned the case in despair. She was then directed to the notorious *panacea* shop of this city, and was dosed with half dozen bottles of the celebrated nostrum, with no other effect than increasing the irritation, and extending her sufferings. In this state of the case we were asked to visit the child, and found her with her jaw perfectly fixed; the angle of the mouth sloughed away; the superior maxillary bone of one side carious, and discharging from four to six ounces of the most fœtid sanies every twenty-four hours; which excoriated the cheek, and rendered her extremely offensive to all her attendants. We recommended to the patient, as the only prospect of any relief, to submit to an operation, provided healthy action could be produced in the parts; which we anticipated from the correcting quality of the sumach. She was immediately put under treatment—laxative and mucilaginous drinks were ordered, and the gargle of the sumach used every half hour: in the course of a week or ten days the morbid action was changed, and the parts put on a healthy appearance. The operation was now performed, in which we removed the whole alveolar process of the affected side; the gums united most gently, the ulcer of the cheek healed up, and the patient recovered

very rapidly, and has remained perfectly well.* The healthy disposition of the soft parts we attribute entirely to the use of the sumach, without which we should not have attempted the operation.

During the time the Dauphin County Alms-house Infirmary was under our charge, we had frequent opportunities of subjecting cases of protracted salivation, sloughed mouths, and ulcerated throats to experiment, which we uniformly found to yield to the infusion of the sumach, and the internal use of mucilaginous drinks and mush diet. The remedy, we think, may be extended with advantage to irritable ulcers of other parts. Its detergent and very soothing qualities, we believe, would contribute very much to healthy action, but we have no instances to support our opinion.

A short time since, we prescribed it in the case of our friend Dr. J. Ross Smith, of the northern liberties, who has suffered much from frequent returns of sore mouth and ulceration of the tongue, which he contracted while in attendance upon the convicts of the New York State Prison some years since, in which it has succeeded admirably well; and at our request he used it, with decided benefit, in a case of salivation threatening unpleasant symptoms, which we annex from his pen in a note to us.

"*April 25th*, 1829.—I was called to see Mrs. A. aged thirty, disease pleuritis, for which she was put under the ordinary treatment in such cases. Depletion having been carried as far as prudence dictated, on the 28th, she was ordered, (by our advice,) the following: ℞. sal. nitre, ʒj.; calomel, gr. xij.; ipecac, gr. viij. M. Div. in ch. No. viij. one to be taken every hour and half.

"*May 1st.*—Pulmonary symptoms all subsided, and she complained for the first of her mouth; from this to the 9th she suffered to an astonishing degree from the effects of the calomel upon the salivary glands. The pulse from 76 now run to 90, and the irritation was such as to cause a recurrence of her fits, as she styled them, which she had been subject to ever since the birth of her first child, now three years of age. A tremulous motion would commence in the head, amounting to a smart rigor, and gradually extend to the body and extremities, with the jaws firmly locked; they would last from ten to fifteen minutes, and then, as she expressed herself, go off at her hands and feet, leaving a slight perspiration: during its continuance the mind was perfectly rational, so much so as to enable her to assist herself, but her memory became greatly impaired. Considering my patient as suffering solely from the effects of calomel on an irritable system particularly obnoxious to the effects of this salt, increased by some disorder of the uterine organs, I resorted to opium, oleum ricini, sulphur, blisters behind the ears, and to the whole list of irritating, as I now consider them, gargles, and with the effect of rather increasing than diminishing the sufferings of my patient. Under these circumstances you were kind enough to

* The operation was performed December, 1825.

visit the patient with me, and at your suggestion she was ordered to make use of the infusion of the inner bark of the root of the Rhus glabrum. She commenced on the evening of the 9th, and on the 10th I found my patient had passed comparatively a comfortable night, and the pain and salivation greatly relieved.

"11*th*.—The pulse had fallen to 78, and on the 15th I discontinued my visits. It may be well to remark that I have since treated this patient for prolapsus uteri, according to Dewees's plan, with entire success."

An infusion of the inner bark of the root of the Rhus glabrum is a very mild mucilaginous refrigerant, and moderately astringent, very cooling and soothing to the irritated surface of the mouth and throat, and can be applied in any stage of disease and at any age. It acts by allaying irritation and obstructing excitement, sheathing the delicate surfaces, and healing abrasions.

There are seven species of the Rhus noticed in Pennsylvania; the Rhus typhinum, R. copallinum, R. glabrum, R. canadense, R. vernix, R. toxicodendron, and R. radicans. Some of these resemble each other so nearly that some botanists consider them as varieties rather than distinct species, and distinguish but five species. It is of much importance to discriminate accurately betwixt the species, as some of the other, and particularly the vernix, which resembles the glabrum very much, is very poisonous.

From Dr. Horsefield's dissertation, we cull the following distinguishing features of the *vernix* and *glabrum*. The *Rhus vernix*, which is known by the different names of poison tree, poison wood, varnish tree, poison ash, swamp sumach, and white sumach, is the largest of all our native species of Rhus; it grows in some instances to the height of twenty-five or thirty feet; its average height, however, may be estimated at ten or fifteen feet. It seldom exceeds five inches in diameter. It occurs near creeks or rivulets, in dark and shaded situations. The common trunk of the *Rhus vernix*, after arriving at the height of four or five feet, generally divides into two branches, which pursue for some distance a regular oblique course. The bark of the trunk is of a dark gray colour; in the upper branches the colour is lighter. The bark of the young trees is generally smooth, it becomes rough and furrowed as they advance in age. The leaves are compound: each leaf consists of four or five pair of pinnæ, (is five-feathered or winged,) which are placed opposite, on very short petioles, and are terminated by an odd one. Linnæus's specific character of the vernix is—*leaves feathered, most intire, annual, opaque, petiole intire, equal.* The flowers are arranged in small separate racemes, which form, at the termination of a long common peduncle, an uninterrupted panicle (of flowers) of considerable length. The peduncles always

originate from the smaller branches, at the basis of a common petiole of the leaves, by which they are surrounded and supplied. The flowers are chiefly produced near the end of the branches, where they exist in great abundance; they are arranged in common with the leaves that support them, circularly around the lesser branches, forming, when the tree is in blossom, a beautiful globular cluster of flowers. They are very small and of a yellowish or herbaceous colour. The flowers are succeeded, on the female plants, by seeds which are arranged on their panicles, in the same manner as the blossoms; they somewhat resemble branches of small grapes. The seeds are not perfectly globular, but a little compressed. They are surrounded in their dry state by a thin, light green corticle covering, which before they become dry, contains a pulpy substance; and the seed contains a small yellow kernel of an oleaginous nature. The *Rhus glabrum*, common sumach, or smooth Pennsylvania sumach, grows in a loose, fertile soil; frequently upon vacant and uncultivated fields, and along the sides of roads and fences. It sometimes rises to the height of eight or ten feet; in many instances it does not exceed four or five. The trunk of the *Rhus glabrum* is seldom erect; after rising in an incurvated or oblique direction, to the height of two or three feet, it divides into several large branches. They are covered with a smooth, light gray or reddish bark, containing a viscid glossy yellow juice, which is not changed on exposure to the air. The leaves, like those of the Vernix, are compound: each leaf consists of nine or ten pair of leaflets or wings, which are placed opposite, and are terminated by an odd one. The Linnæan specific character is; *leaves feathered, sawed, lanced, naked on both sides.* The leaves, which in summer are of a deep red colour, change to a beautiful red, in autumn. The flowers are produced in large, erect, compound thryses, at the termination of the superior branches. They are of an herbaceous colour; and after they arrive at maturity, early in autumn, covered with a white tenacious powder, of an agreeable acid taste, and has been called, in various parts of Pennsylvania, *Indian salt.**

Though alike in appearance, the therapeutic effects of these species are widely different; while the vernix and radicans produce great excitement and inflammation, the glabrum is considered innocent and harmless. Dr. Barton informs us,† that it "is excellent for removing warts, and also tetters." This shows, says he, "that even this species,

* An Experimental Dissertation on the *Rhus vernix, Rhus radicans, and Rhus glabrum*, published 1808.

† Collection for an Essay towards a Materia Medica of the United States.

which is generally deemed innocent, possesses some active quality." The *vernix*, *radicans*, and *toxicodendron*, have been extensively and very successfully used by MM. Dufresnoy, Pore, Gouan, in France, and Verdeyen, Van Baerlem, and Burdach of Germany, in paralysis, herpes, and consumption; and is said to exert a very active influence on the nervous system: great care therefore should be taken not to mistake the one for the other species.

Art. X. *On Phlegmasia Dolens.* By W. P. Dewees, M. D. Adjunct Professor of Midwifery in the University of Pennsylvania.

We have retained the name of phlegmasia dolens, (the phlegmasia alba dolens puerperasum of White,) for a peculiar condition of the lower limb, because its pathology is still as unsettled as in the time of Mauriceau, whom we believe was the first that gave any satisfactory account of it; for the description left by Rodrigues a Castro, can scarcely be tortured, by any partiality for antiquity, into the disease of which we are about to treat, though Dr. Hull complacently inclines to the belief, that he was acquainted with it. And we doubt whether the disease of the apothecaries' wife, as described by Wiseman, was really the disease in question, as it is but casually mentioned in his chapter upon "Abscesses and Corrosive Ulcers arising from Distempers of the Womb in Childbed," and what renders it especially doubtful, is, that he declares, matter formed in various places.

There cannot be a question however, that Mauriceau was well acquainted with this disease; as his description is still a pretty faithful one, in the main. By this author, and several others, the disease was attributed to some derangement of the lochia, which when not sufficient, was thrown upon the large nerves of the thigh, and thus created pain and swelling, &c. From the time of Mauriceau, to that of Puzos, the disease appears to have been familiar to a number of practitioners, as Manningham, Mesnard, &c.

It was however found, after a time that the appearance of this disease did not obey any particular state or condition of the lochia; and that as it was very commonly accompanied by a diminution, or suppression of the milk, a new hypothesis was invented, and it was made to consist, of a metastasis of this fluid. Puzos with a great show of reason, has a prior claim to Levret, for this suggestion; as the latter himself refers to the former's "Mémoires sur les dépôts laiteux," and speaks

approvingly of them. These great men were followed by Astruc, who treats expressly upon this subject. Sauvages, fully adopted these notions in his nosology, and treated of them under different genera and species.

Van Swieten, Lieutaud, Raulin, Selle, &c, all seem to have acknowledged the great influence of the milk upon the constitution; and each has treated of its metastasis.

Mr. White of Manchester, was the next to invent a theory of this disease; he made it consist of an obstruction, rupture, or a disordered condition of the lymphatics, and he was followed in this opinion by others. Mr. Trye pretty freely criticized the opinion of Mr. W. and said that, though he could not discover any grounds for supposing the trunks of the lymphatics to be ruptured in labour, "yet he could easily conceive, that the obstruction to the return of the lymph may commence in the primary inflammation of a trunk or trunks, and that probably this may be the case more frequently than he had hitherto discovered, or suspected it to be." Mr. Trye was followed by Dr. Hull, in a valuable and highly learned work upon this obscure, and debatable disease. Dr. H. says, "the *proximate cause* consists in an inflammatory affection, producing *suddenly* a considerable effusion of *serum* and *coagulating lymph* from the exhalents into the cellular membrane of the limb." Dr. Davies, of London, next offered new pathological veiws, of the proximate cause of phlegmasia dolens, and makes it consist in an inflammation of "one or more of the principal veins within and in the immediate neighbourhood of the pelvis, producing a thickening of their coats, the formation of false membranes on their internal surface, a gradual coagulation of their contents, and occasionally, a destructive suppuration of their whole texture; in consequence of which, the diameters of the cavities of these important vessels become diminished, sometimes so totally obstructed as to be rendered mechanically incompetent to carry forward into their corresponding trunks the venous blood brought to them by their inferior contributory branches."*

Thus, we have five different hypotheses, for phlegmasia dolens; of either of which it would be difficult to make a choice, if we consulted their value, either, in relation to the phenomena this disease presents, or to the pathological condition of the parts affected, as far as has yet been revealed, by dissection. On these several opinions, we shall pass a few remarks; and believing neither to be the true proximate cause, that it is right to give the arguments against each, that

* Lond. Med. Chir. Trans. Vol. XII. p 426.

our reading has supplied us with, as well as those, that has suggested themselves to us from attentively having observed the phenomena of this painful affection.

The two first opinions, (namely, that phlegmasia dolens is caused by some derangement of the lochia, or from a metastasis of the milk,) will scarcely require a remark; as subsequent observation, has abundantly proved, that neither has ever had the slightest agency in its production, even as a remote, or as an exciting cause. And further, were either or both, to be admitted as contributing to this affection, the pathological condition of the seat of the disease, as caused by them, would still remain unexplained.

Mr. White of Manchester, must be considered the first writer, who had attempted a pathological exposition of phlegmasia dolens; and much credit is due to his industry, and learning upon this subject, though we cannot yield to him the merit of having been satisfactory, or perhaps even clear. He declares this disease,

"Is owing to the child's head pressing the vessel or vessels which arise from the lower extremities, against the brim of the pelvis during a labour pain, so as to stop the progress of the lymph; that the number of valves will effectually prevent it from regurgitating, and if the head continues any time in this situation, while the lymph is driven on through the valves by the peristaltic contraction of the coats of its vessels, by the great exertion of the muscles, and the strong vibration of the inguinal artery, though its coats (the lymphatics) should be allowed to be stronger than those of the blood-vessels, it must at last burst and shed its contents. When the orifice made in the lymphatic is heated, and the diameter of the tube is contracted, or totally closed by the cicatrix, the lymph is retained in the lymphatic vessels and glands of the limb, and the labia [labium] pudendi, and distends them to such a degree and so suddenly, as to occasion great pain and swelling, which always begin in the part next to that in which the obstruction is formed, and when the obstruction is in part or wholly relieved, or the lymph has found a fresh passage, the part next to it is consequently relieved." pp. 49, 50.

He adds, "If the above hypothesis be true, the predisponent cause may in all probability be a weakness in the coats of the lymphatics in such subjects only, as have these vessels formed into one principal trunk under Poupart's ligament." p. 55.

Objections to these conjectures of Mr. White will readily present themselves; for it supposes that some obstructing cause or pressure to be absolutely necessary. Now, if it be even admitted that the child's head affords this pressure, at the brim of the pelvis in some cases, it could not have done so in all the instances, in which this disease has appeared. For, 1st, this pressure cannot take place to the necessary extent, but in a very few instances; for it is notorious to accoucheurs, that for the most part, in a well-formed pelvis, the head may be even

larger than it is usually found, and yet pass without difficulty. 2d. The portion of the brim of the pelvis at which, in ordinary circumstances, this pressure is found to exist, is not that at which the lymphatics would be subject to its influence; for as a general rule, it would be behind either of the acetabula. 3d. That no other part save the head, could effectually exert this pressure; yet it is agreed on all hands, that no position of the child yet discovered, is more efficient in its production than another. 4th. That a pressure so long continued and so effectual, "as to stop the progress of the lymph," and eventually to cause a lymphatic to burst, must necessarily produce upon the intervening parts, a gangrenous condition; yet this is a casualty, we have never heard of. 5th. Several circumstances connected with the history of this disease would still remain unaccounted for; as the occurrence of the disease in the opposite limb; and this not simultaneously, but after a considerable interval; and not until after, as a general rule, the first affection is yielding; to the pain and swelling first occurring in the calf of the leg, as it sometimes does; for if Mr. White's statement be true, that "*pain and swelling always begins in the part next to which the obstruction is formed,*" p. 51, the pain and swelling must primarily exist in this part of the limb; therefore is not indebted to pressure exerted on the brim of the pelvis for its existence.

The arguments just urged might appear sufficient for the purpose intended by them; but as several conclusive ones have been employed by Mr. Trye to the same end, we think we should not be rendering justice to this gentleman did we altogether omit them. He observes, that

"No experiment has shown that the lymphatics can be torn, without doing equal violence to the other vessels of the part. That practical anatomists have ascertained that these vessels will bear a weight of quicksilver, equal in effect to a much greater force than is required to circulate the lymph towards the thoracic duct. That the force exerted by the child's head in its passage, cannot exceed that of the pad of a tourniquet on the arm or thigh. That if the trunk of a lymphatic be compressed, its contents are forced inwards towards the thoracic duct if no obstruction exist; in this case its sides are squeezed together, and will consequently occupy so little space, that in cannot be well ruptured at the compressed part. If a rupture then takes place, it must be below the compressed part—but no reason can be given for this taking place always in one place, namely, within Poupart's ligament, rather than in the leg or thigh."

Besides, we have known two instances of this complaint to follow abortions in the early months; and once in a premature delivery between the sixth and seventh month; in this instance, the child had been dead at least one month previously to its delivery. Again, my

friend Dr. Chapman informs me of a violent case having occurred in a patient in our Alms-house, labouring under cancer uteri. But above all it has happened to the arm of the male, as recorded by Dr. Ferriar,* besides an instance, of the same kind, that fell under our own notice in 1788. A gentleman, pretty far advanced in life, received a severe contusion on the point of his shoulder, by the overturning of the mail coach. He however paid but little attention to it, and merely rested it in a sling, as it did not prevent his attention to business for several days; but at the end of this time, the arm became very painful, and swelled rapidly, considerable fever was excited, and the gentleman was obliged to keep his bed. The controul of the motions of the limb was entirely lost, as every attempt to move it was attended by exquisite torture. The character of the swelling was precisely that of the *milk leg*, to which it was compared at the moment, by my preceptor—that is, he declared, had the same affection befallen the leg of a lying-in woman, he would have called it a *milk leg*. After a tedious, and an active treatment of three months, symptoms of amendment showed themselves; but it required a long time to restore the limb to its former usefulness—indeed, from what we afterwards learnt, it never became as strong as the other.

This case is not unique; several instances of this kind are upon record; all of which, perhaps, are not entitled to the distinction. Dr. Ferriar's case is perhaps one, that could not be quoted as a genuine instance of phlegmasia dolens; nor do we regard the one related by Littre, under the care of Luminier, to be without exception, as there was well-marked red inflammation.† Yet that related by Dr. Heermans appears to have been a genuine instance of phlegmasia dolens in the male.‡

Besides, we are informed, that phlegmasia dolens, has happened to women not pregnant; of this we can only speak from the authority of others, for we have just said above, that this took place in a patient under the care of Dr. Chapman, in our Alms-house; and Dr. Beck mentions a case where it took place in a woman of fifty-two years of age.

Dr. Moore, of Ipswich,§ makes a singular remark upon the opinions of Mr. White; the force of which we cannot perceive, though it purports to overthrow his doctrine at once. He says, "in refutation of Mr. White's opinion, I will state, that in no

* Medical Histories, Vol. III. p. 92. By Dr. Ferriar.

† Medico-Chirurgical Review, for April, 1829.

‡ Dr. Francis' Memoir, p. 9.

§ New England Medical Journal, Vol. II. p. 229.

instance that has come to my knowledge, has the disease preceded parturition." Now, how this refutes Mr. W.'s opinion we cannot understand; for in no instance does Mr. W. require that parturition should always happen before this disease can be produced; and in our humble opinion, had Dr. Moore have known an instance of phlegmasia dolens preceding parturition* it would have told very much more against Mr. W.'s hypothesis, as the great agent in producing this disease, in Mr. White's opinion, would have been wanting; namely, pressure from the child's head during labour. But Dr. M. should have not attempted to pass his want of knowledge of such cases for more than it is worth; since many cases of the kind alluded to may have taken place, without his being apprised of them; for certainly it has happened, as stated above, that this disease has occurred to unimpregnated females. Now if this be so, we do not see by what law of pregnancy, the woman is secured against an attack.

By the by, we may remark, that Dr. M. dismisses the hypotheses of Mr. Trye and Dr. Ferriar still more cavalierly, and with still greater brevity. Of the first he says, it "is mere supposition;" of the second, "in reply to Dr. Ferriar, I will adduce the fact, that phlegmasia dolens as frequently follows natural and easy labour, as difficult and laborious."

These assertions of Dr. Moore, purporting to be refutations, were to pave the way for the explanation which he offers immediately after, in the following terms.

"After an attentive observation of cases, and a careful examination of the subject, I will humbly offer the following explanation as the most satisfactory to me."

"During gestation, the abdominal muscles, their vessels, and integuments, are in a state of great preternatural distention; immediately after parturition, when the distending cause is removed, these parts powerfully contract in order to regain their natural dimensions. If this effort be unequally exerted, if it be suddenly excited by the application of cold, if the lymphatic vessels be overdistended at the time of plethora, or great debility subsists in the vessels themselves, an interruption and accumulation of the fluid ensues; the great and long accumulation of which, acting as an extraneous and offending cause, will occasion inflammation. In persons of a plethoric and irritable habit, inflammation may quickly supervene; while on the other hand, in a person of a contrary habit, it may be more tardy in its progress." p. 230.

We would now ask, if ever hypothesis was more heavily laden with conjecture, and supposition, than this—it has not even the merit

* Puzos relates two instances of this kind; one took place at the 4th, and the other at the 7th month of utero-gestation. And we have seen two instances in which it followed premature delivery.

of ingenuity, much less an imposing probability to reconcile its meager pretensions. The initial postulate is not founded in fact, for we cannot look upon the distention imposed upon "the abdominal muscles, their vessels, and integuments," as "preternatural," since, in being put upon the stretch by pregnancy, they are but performing one of the offices for which they were designed. His second is no better grounded; for, after parturition has removed the distention, "the abdominal muscles, their vessels, and integuments," do not "powerfully contract in order to regain their natural dimensions;" for this is performed silently, and gradually, and requires for its completion many days. We have just shown how reluctant Dr. M. is to permit either Mr. Trye, or Dr. Ferriar, to conjecture, or to suppose; yet, he says himself, in the attempt to make out his explanation, "*if* this effort," &c.; "*if* it be suddenly," &c.; *if* the lymphatic vessels," &c.; such and such things will happen. That is, we shall have inflammation from an accumulation of lymph in the lymphatic vessels; and in what essential point does this "explanation" differ from that of Mr. White, or Mr. Trye? in none that we can see, if we except the agent by which the interruption to the circulation of the lymph is effected—in one instance it is the head of the child; in the other it is *cold* and *debility*.

We should not have thought it necessary to notice this "explanation" in an especial manner, did not the doctrine it inculcates lead to a mischievous, and reprehensible plan of treatment; for the doctor observes—

"In the ordinary mode of treatment, much time is lost in the inefficacious use of diuretics; and much mischief and pain produced by the application of blisters, and other stimulating remedies." "From the view here taken of the subject, I am fully disposed to regard it as a local disease, and decidedly recommend the early application of a large emollient poultice, which, by its relaxing and resolving power," (recollect the doctor's opinion of the cause of the disease, is, debility and over-distention,) "will, in a great majority of cases," (has he ever seen a sufficient number to determine this important point? the doctor only mentions two cases, and neither of which, was the disease in question,) "prevent the formation of a distressing and tedious disease. And when it does not produce this most desirable effect, I should recommend its continuance, with an intention of producing *early suppuration, which I think next to resolution, the most speedy and safe termination of the disease.*" p. 231.

Was ever a disease less understood; or a more preposterous remedy, ever proposed! The continued application of an emollient poultice is every thing that is necessary for the relief of a milk leg!

We have good grounds for believing Dr. Moore had never seen a case of phlegmasia dolens, if we take the two cases he details as spe-

cimens. In the first case, the patient complained of a pain in the right hip and back; rigors and watchfulness; *a rigidity and soreness of the abdominal muscles;* pain in moving the limb; *the pulse a little increased, slight thirst, and perfectly clean tongue.* For this state of things, antimonials, cathartics, and fomentations were prescribed. These proved ineffectual; bark, guaiacum, and a continued blister to the thigh were employed.

"This course evidently increased the local affection. *The upper part of the thigh, the inguinal glands, and right iliac region, become more tumefied, which gradually extended to the hypogastrium and labium pudendi.*"

"In the early stages of the swelling it appeared in *ridges* and *bunches*, occasionally assuming a *livid*, and at other times a *purple hue.*"

It became more uniformly diffused, tender, hotter than natural, shining, but not much discoloured. The fever kept pace with the local affection; the pulse was small and very frequent. The swelling increased. "With an intention of *rousing the action of the absorbents*, a *volatile stimulating liniment* was applied, and in turn hot vinegar; but these had no better effect than the blistering!!"

Digitalis was now administered; this increased the debility; *the inflammatory appearances became more evident; the pain, heat, soreness, and redness increased, until a discharge took place from a ruptured lymphatic* in her side, about an inch from the inferior spinous process of the ilium. p. 228.

The second case is still farther removed than the first, from being an instance of phlegmasia dolens. This occurred in a person of robust constitution; it supervened on natural labour. On the second day after the delivery, the patient experienced a great rigidity of the abdominal muscles, which increased in tenderness, and presented an appearance of "ridges and bunches;" the constitutional symptoms high; these increased until *suppuration took place from an "opening a little below the navel.*"

We have italicized such parts of these histories, as show at once, that they were not instances of plegmasia dolens; and also such, that have excited our wonder in regard to treatment. If the cases just related, and others, that we shall have occasion to mention presently, be received as genuine instances of phlegmasia dolens, the pathology of this disease will remain unsettled to the end of time.

We have already cursorily mentioned the opinion of Mr. Trye, of the proximate cause of phlegmasia dolens; we shall now develope it more in detail. He says, p. 70—

"I have considered the *proximate cause* of the swelling to be seated in the *lymphatic glands.* I will not contend that it must be so universally, because

there is a probability, that the original seat of obstruction and inflammation may, in some instances, be in the principal trunks of the absorbents within the pelvis, independent of, and abstracted from the iliac glands; in which case the inflammation may be continued along the absorbent vessels downwards; that is, towards the labia pudendi, leg, &c. as well as upwards, or towards the thoracic duct."

Dr. Ferriar is also mentioned as an inventor of a theory for phlegmasia dolens; but he does not appear to be entitled to this claim, since he has only adopted the opinion of Mr. Trye upon this subject. And were we even to admit he had not seen Mr. T.'s work, he must at least have been familiar with the opinions of Drs. Denman and Latham. The lectures of the former he most probably attended.

We shall make no observations upon the opinions of Mr. Trye and Dr. Ferriar, until we have noticed the hypothesis of Dr. Hull, which we shall now give in his own words. He states, that—

"From an attentive consideration of the whole of the phenomena observable in this disease, and of its remote causes and cure, no doubt remains in my mind, that the proximate cause consists in an inflammatory affection, producing suddenly a considerable effusion of serum and coagulating lymph from the exhalents into the cellular membrane of the limb." "The seat of the inflammation I believe to be in the muscles, cellular membrane, and inferior surface of the cutis. In some cases, perhaps the inflammation may be communicated from these parts to the large *blood-vessels*, *nerves*, and *lymphatic vessels*, and *glands* imbedded in them."

We have united the hypotheses of Mr. Trye, Dr. Ferriar, and Dr. Hull, because they are essentially one and the same; namely, that the proximate cause is an inflammation of the lymphatics and glands of the groin; though as a whole, Dr. Hull's assumes a much broader ground; so much so indeed, that Dr. Davies styles it with much point, "a capacious theory."

The objections which present themselves to these explanations, are, first, their incompatibility with one especial phenomenon of the disease, namely, the *shining white* appearance of the limb throughout the whole course of the disease; and this so notoriously so, as to have it as one of its genuine characters. In all instances of inflammation of either, muscle, skin, lymphatic,* or blood-vessels, redness is a

* In the time of Dr. Hull, the term "lymphatics" was understood to mean the lymphatic absorbents; the researches of Bichat had not then made it necessary to distinguish this set of vessels, and those whose office it is to convey the lymph, being either the termination of arteries, or the beginnings of veins. And we beg the reader to keep in mind, that where "lymphatics" are mentioned in the quotations of either Mr. White, Mr. Trye, Drs. Hull, Ferriar, or Moore, that the lymphatic absorbents are to be understood.

never-failing attendant, as is well known to all who are familiar with disease. Yet this does not happen in phlegmasia dolens, notwithstanding the numerous tissues Dr. Hull involves in the mischief. 2d. That were all these tissues in a state of inflammation, this inflammation would manifest itself by the ordinary phenomena of this affection; namely, heat, *redness*, swelling, pain; yet we find *redness* always wanting in phlegmasia dolens, when this disease is pure and uncomplicated. If muscle be inflamed, redness is sure to be present; if the skin, the same thing occurs; if the trunks of lymphatics, (absorbents,) be the seat, we have frequent opportunities to witness that they become red; and when the lymphatic glands are in this condition, redness notoriously attends. And though Dr. Hull does not suppose, that all these parts are simultaneously affected, but successively, yet it alters not the fact, that in phlegmasia dolens redness is always absent during the whole course of the disease.

3d. Besides, this progressive extension of inflammation cannot well be sustained, as the rapidity of the disease is such sometimes, as to involve the whole limb in the course of a very few hours; whereas the transmission of inflammation by contact even, is sure to be much slower; yet it would not fail to betray its progress by all the phenomena of inflammation, were it to exist in such parts.

4th. When the lymphatic glands become inflamed by the absorption of some acrid substance, or specific poison, the venereal poison for instance, they not only become red themselves, but the lymphatics even that convey the poison, can be distinctly traced in their course, by the vivid red that marks their inflamed coats.

5th. The ordinary inflammation of the several parts declared to be involved in phlegmasia dolens, moreover, do not thus suddenly effuse serum; of this, proofs, in the progress of this affection, present themselves every day, as in rheumatism, wounds, contusions, the insertion of poisons, &c.

6th. When the lymphatics are inflamed, together with their glands, it is acknowledged by Dr. Ferriar himself, that "the vessel can be distinctly traced in its course by its hardness and enlargement, and frequently by a *slight inflammation* of the superincumbent skin, forming *a red or purple streak*, and extending with the affection of the vessel."*

7th. We do not agree with Dr. Ferriar in the assertion, that "the violent pressure on the internal iliacs, and the accompanying veins and nerves, which takes place during delivery, must undoubtedly be

* Med. Hist. Vol. III. p. 95.

considered as a powerful occasional cause of *lymphatic inflammation.*" p. 120. Now, if this were true, phlegmasia dolens would be of much more frequent occurrence than it is found to be; since this pressure is common to all labours, yet the disease in question is one of very rare occurrence.

8th. Because in phlegmasia dolens, one of its inseparable characters is the exquisite sensibility of the *whole limb;* so much so in most instances, that the patient cannot bear the slightest pressure, or the slightest motion, yet Dr. Ferriar informs us, that "the pain in *lymphatic inflammation* is referred to the enlarged *glands*, and is *not remarkably increased by motion; there is more stiffness than actual pain in the whole limb.*" p. 102.

9th. Because, in the twelve or fourteen cases of exquisitely formed phlegmasia dolens, that we have seen, we never were able to trace the "inflamed lymphatics," or to feel the "enlarged conglobate glands;" yet, both of these circumstances are declared to be constantly present, by those who espouse the pathology under consideration.*

10th. Because, Dr. F. furnishes a case himself, which disproves his own explanation, viz.:—

"Jane Waters, aged twenty-five, was delivered by an accoucheur, of her second child, December 26th, 1797, after being four days in labour. During delivery she lay upon her left side. December 27th, she was affected with pain and swelling of the left knee, which descended to the leg and foot of the same side. On the 28th of December the swelling began to rise from the left knee and to affect the thigh. It extended up to the left groin and labia pudendi. I saw her for the first time on the 3d of January, 1798. I found the swelling tense, uniform, not discoloured; that there was a great sensation of rigidity in the limb, and that it was *extremely painful on being touched or moved.* She felt *exquisite pain in the ham,* where I could perceive the lymphatics *a little enlarged. The glands of the groin were not affected.*" p. 127.

In this case there was an exquisitely formed phlegmasia dolens: for it was attended by all the essential characters of the disease; the limb was exquisitely tender to the touch; the swelling was uniform and elastic; it was not discoloured; the glands of the groin were not affected, and the lymphatics in the ham could be perceived to be "a little enlarged." Here then was a case of genuine milk leg, without

* Dr. Hull declares the same inability; he says, "I have never met with either enlargement or inflammation of the lymphatics in any stage of the complaint; I am therefore convinced that this is a rare occurrence, and by no means essential to the disease."—*Essay on Phlegmasia Dolens,* p. 116. It will therefore be perceived that our observations only apply to Dr. Hull, as far as he admits the lymphatics to be involved.

inflamed "lymphatics" or "conglobate glands." We think we have said enough to prove that this pathology is not well founded; and that, if inflamed lymphatics, or enlarged glands be present, that they are the consequences, and not the cause of the disease called phlegmasia dolens.

The next hypothesis in order, and it is the last with which we are acquainted, is one of late date; it is by Dr. David Davis, a teacher and practitioner of considerable celebrity in London.

Dr. Davis attempts to prove, that phlegmasia dolens is the consequence of an inflammation of one or more large veins; ending in the production of an extraneous membrane or other obstructions, within their cavities; and thus offering remoræ, to the returning blood from the extremity.

This view of the subject, from its supposed truth, has gained much more notoriety, than can be sustained by facts; though supported by the powerful aid of Velpeau; and we may add that of Bouillaud and Ribes. When we say this, we would not wish to be understood as implying the slightest disbelief of the truth of Dr. Davis's statement; on the contrary, we are fully persuaded that neither he nor the gentlemen who, both directly and indirectly, support his doctrine, have set down nothing that they did not see—the only question then is, were the dissections of these gentlemen cases of phlegmasia dolens? this is the point at issue—whether phlebitis and phlegmasia dolens are identical; or in other words, are the cases related as cases of the latter, any other than instances of the former?

Before we proceed further in the examination of this question, it will be proper to determine the absolute character of phlegmasia dolens from the best accredited *practitioners;* for to them alone should the appeal be made. And perhaps one of the older writers of this kind, will be the safest guide upon this occasion. Callisen has summed up the characters of this disease most happily in a very few words, making allowance for the introduction of one of its supposed causes in his time, namely, a metastisis of milk. "Œdema puerperarum, aliis lacteum *est* tumor elasticus, albescens, renitens, calidus, dolens, foveam impressi digiti haud retinens, puerperis haud infrequenter, gravidis rarissime infestus." He has, however, omitted a very material feature of the disease, namely, fever; for, as far as we have seen, this condition of the system has always been present, and sometimes to an alarming degree.

The essential characters then of phlegmasia dolens may briefly be stated to consist of the following strongly marked characters. 1st. Fever always to a greater or less degree. 2d. Pain generally com-

mencing in the hip, groin, and sometimes the back. 3d. Swelling commencing at the seat of pain, and proceeding with more or less rapidity down the whole limb. 4th. The swelling elastic, not retaining the impression of the finger. 5th. The whole swoln part white, even more so than natural in some instances, but never red, when uncomplicated. 6th. The whole limb exquisitely sensible to the touch. 7th. Total inability to move the limb, and action always creating great suffering. 8th. The temperature of the whole affected part, much above the natural temperature. 9th. The labium pudendi of the diseased side, almost always participates in the swelling, but never extending to the other labium, unless the other limb be also affected. 10th. After the first leg begins to improve, or is perhaps nearly well, the opposite leg runs through a similar course, and sometimes with an aggravation of symptoms. 11th. That the limb thus affected, rarely suppurates. 12th. That this disease is rarely attended by danger. 13th. That after the more violent stage of inflammation is abated, which generally happens, under proper treatment, about the sixth or eighth day, that the swelling abates its elastic character, and takes on that of a common œdema. 14th. The milk usually diminishes, and sometimes disappears.

We have been thus particular, yet we trust strictly faithful, in enumerating the essential characters of phlegmasia dolens, that the coincidences and discrepancies between it and phlebitis, may be more readily subjected to comparison.

Symptoms and general character of Phlebitis.—In giving an analysis of the symptoms of phlebitis, we have chosen the one condensed in the Medico-Chirurgical Review, Vol. IV. p. 509, from Recherches Cliniques pour servir à l'histoire de la Phlebite; par M. J. Bouillaud, M. D. Revue Méd. Avril et Juin, 1825; and from Exposé succinct des Recherches faites sur la Phlebite; par M. F. Ribes, M. D. Revue Méd. Juillet, 1825. We have done this in preference to other authorities, because they are the latest who have written on this subject, though we have no evidence that they consider this affection constitutes phlegmasia dolens. We shall give the English version, as contained in the above named Review. First, of Dr. Bouillaud.

"*Symptoms.*—1. The symptoms of *inflammation in the trunk of a superficial or external vein are easily recognised.* The member swells, becomes hot, painful, or is even the seat of *phlegmonous erysipelas.* The *vessel itself feels tense, hard, knotty, or like a cord. Abscesses* not unfrequently form *in the course of the vein.* The pain, our author thinks, is more dependant on an affection of the neighbouring nerves, than on inflammation of the vein itself. *Œdema of the limbs is a very common attendant on phlebitis of one or more of the principal veins,* and evidently arises from the mechanical obstruction to the return of the blood—the

veins being now acknowledged to be the principal conductors of the serous exhalations, (see note * to p. 74,) that take place into the cellular tissue. Such are the signs of local phlebitis.

"2. When the inflammation extends to the whole, or to a great portion of that vast membrane which lines the internal surface of the venous system, we constantly find that a violent fever is lighted up. Among many of our patients, the fever presented all those characters which are attributed to what are called *putrid, adynamic, or typhoid fevers;* and indeed the term *putrid* is perfectly applicable, since after, nay *before* death, there are unequivocal signs of decomposition, or a kind of putrid fermentation of the fluids."

Second. Mr. Ribes says, "*The veins are very frequently inflamed,* and this affection is a *very dangerous one.*" (Yet phlegmasia dolens is a rare disease, and is very seldom dangerous.) "In incipient phlebitis, the patient experiences a slight *pain in the track of the veins affected.* These vessels *swell and become prominent, presenting a light bluish colour, and subsequently a brownish pale hue.* The circulation *ceases in the vessel,* and the blood becomes more or less *decomposed.* If the circulation should be re-established, the contents of the vein are carried into the current of the circulation, and dangerous consequences may ensue." p. 512. "Phlebitis is a *serious malady,* and is often *quickly mortal.*" *Ibid.*

We have thus brought into opposition the characteristic symptoms of phlegmasia dolens, and phlebitis, which we now submit to the reader's candour to determine the strength of their analogy, or rather how far they are entitled to absolute identity. Let him run his eye over such parts of the description and consequences of phlebitis as are emphasized, and compare them with the general history of phlegmasia dolens, and he will at once, we are certain, perceive their discrepancies, and determine their entire want of sameness.

But lest it be thought that we have drawn our conclusions from premises not attempted to be sustained by Dr. Davis, we will produce in a very short compass all the symptoms detailed in his histories, that he may speak for himself.

"Case I.—Caroline Dunn, æt. 21; weak constitution; delivered on the 7th of February; severe labour; some hæmorrhage after delivery; placenta removed artificially. 8th. Pulse 90; tongue white and moist; no pain in the abdomen from pressure; soreness in vagina. On the 13th, slight fever; pulse full and quick; costive; tongue white and dry; the *labia pudendi inflamed and œdematous;* some head-ache; respiration difficult; discharge from vagina resembling cream." 17th, better; 21st, much better; 22d, still better; 26th, worse; leg and thigh much swollen; pain in the groin; no signs of inflammation; no pitting on pressure; 28th, no better; leg pitted on pressure; March 3d, total insensibility; limb equally swollen; 4th, died.

We shall introduce a part of the dissection, as performed by Mr. Lawrence, "which is a sufficient guarantee for its correctness." Med. Chir. Review, p. 381.

Dissection.—"The left lower extremity presented an uniform œdematous enlargement, without any external discoloration, from the hip to the foot. This was found, on further examination, to proceed from the ordinary anasarcous effusion into the cellular membrane." The inguinal glands a little enlarged, as they usually are in a dropsical limb, but without any sign of inflammation. The femoral, external iliac, common iliac firmly plugged, apparently by a coagulum of blood. The other veins thickened, except the saphena and branches, which were healthy. That the substances occupying the cavities of the vein, were the product of inflammation.

We cannot do better than present the observations on this case contained in a review of Dr. Davis's work on phlegmasia dolens.

"We take the liberty of differing from Dr. D. on the identity of the case described with that of real phlegmasia dolens. We ground our first doubt on the *fatal issue* of the case, which is contrary to the general experience of the profession hitherto; for it must be recollected that Zinn's patient died of asthma, and not of phlegmasia dolens. If then there are very few cases on record where phlegmasia dolens in itself proved fatal, we have at least grounds for supposing, (we do not say it amounts to proof,) either that Dr. Davis's case was *not* phlegmasia dolens, or that its proximate cause was different from the proximate cause of phlegmasia dolens in general." p. 382. Med. Chir. Rev. Vol. V. No. 18. The reviewer asks in a note, "Is it likely that so serious and generally so fatal a disease as an inflammation of the internal coat of veins, under other circumstances, should be almost invariably devoid of danger in phlegmasia dolens?" *Ibid.*

"Our main doubt, however," continues the reviewer, "is grounded on the anatomical, or rather, the pathological difference between Dr. Davis's case, and those described by authors. We have Mr. Lawrence's authority that the enlargement of the limb proceeded from *ordinary anasarcous effusion* into the cellular substance. Does this state harmonize with the description of phlegmasia dolens as given by authors, or as seen by practitioners? It is contradistinguished, by all the writers we have perused, from *anasarcous infiltration*, (and certainly by our own observation in at least four or five cases,) by the tense, or hard, or at all events, elastic swelling of the limb—*not pitting* on pressure." p. 382.

Dr. Bateman runs the following parallel between the two diseases:—

"The swelling is general and equal over the whole limb; it is much harder and firmer than in anasarca, in every stage of the disorder; it is not so cold, in any state of the disease, as in the dropsical swelling, nor so much diminished by the horizontal position; neither does it *pit* when pressed upon by the finger, nor does any water issue from it when it is punctured by means of a lancet."—*Rees's Cyclopædia*, Vol. 28. "When these descriptions are compared with Mr. Lawrence's dissection, we think every unprejudiced mind will agree with us that Dr. Davis's case was of a character wholly different from genuine phlegmasia dolens." p. 383.

"Case II. A lady of a sanguineous, irritable temperament, died suddenly in the midst of apparently high and perfect health, on the 20th of September, 1819, six weeks after confinement. She was seized with peritoneal inflammation the day after delivery, which yielded to active measures. Ten days after this she complained of *a deep-seated pain in the groin, and along the great vessels.* Dr. D. found the *limb swelled, and very painful,* but by leeches and blisters, this new inflammation was speedily reduced, and in a week, the swelling had entirely subsided, the patient having recovered the perfect use of the limb. From this period she convalesced rapidly and satisfactorily, but died, as above stated, in the midst of apparent health."

In what possible respect can this case be looked upon as a case of phlegmasia dolens? Is there a single coincidence between the two diseases? The only circumstances on which even a remote analogy can be based, is "*a deep-seated pain in the groin,*" and that "*the limb was considerably swelled, and exquisitely painful.*" But will such conditions of a limb, constitute phlegmasia dolens?

"Case III. This is a case communicated by Dr. Davis's friend, Mr. Oldknow. A woman was delivered, by an easy labour, in September, 1820. She did well for about three weeks. She was then attacked by a violent diarrhœa, for which she took astringents. Fever continued. On the thirtieth day after delivery the diarrhœa returned, and 'the left lower extremity became *swollen and painful,* with considerable increase of fever.' Four days afterwards she died." p. 435.

In this case, the only pretence for calling this a case of phlegmasia dolens, during the life of the patient, was the existence "of swollen and painful lower extremity;" and no proof of its having been a case of this kind, is adduced by the examination after death. The whole attention of the operator appears to have been occupied in the examination of the blood vessels; "the femoral vein and iliac veins were much enlarged, and contained adherent layers of coagulated blood. The same appearances, but in a lesser degree, were observed in the cava as far as the entrance of the renal veins. The coats of the veins were highly inflamed, and intimately attached to the surrounding parts. The absorbents and glands were slightly enlarged." These morbid changes may perhaps with propriety entitle this case to stand with those of phlebitis; but it has no possible right to be ranked with those of phlegmasia dolens.

The sudden death of this patient, we conceive, will effectually prevent this case from being acknowledged as one of phlegmasia dolens,*

* It is true, that in the case related by Puzos, the patient died on the fifth day; but she appears rather to have "died of the doctor," than of phlegmasia dolens. He relates another, that took place in the fourth month of pregnancy, and which proved fatal on the ninth day.

for we believe from what we have seen and read of this disease, that it is the first instance, if it be one, that has terminated so suddenly in death. Indeed, this termination is so confessedly rare, that phlegmasia dolens has never been looked upon as a disease of danger,* though one for a time of great suffering, and almost always one of tedious convalescence.

Case IV. A lady of a delicate constitution, an irritable habit, was delivered on the 2d of July, 1821. She was doing well until the seventh day; on this day she was exposed to cold, and was seized with a rigor. During the forming of the hot stage, she felt a pain in her left side, which increased rapidly, and for which she was bled without much relief. She was afterwards bled, leeched, and blistered. The affection of the chest was relieved, but fever continued. In the evening of the 9th "unequivocal symptoms of phlegmasia dolens declared themselves." She died on the 23d of the same month.

"On dissection, there was effusion and inflammation in the chest, 'the left lower extremity, from the hip to the toe, was considerably, but not greatly enlarged, and there was an evident enlargement of the labium pudendi.' The iliac veins on both sides were unusually turgid with blood. When the left was opened, it was found to contain a firm coagulum of blood, not adherent to the vessel at that place. Higher up, however, in the common iliac portion, the coagulum was adherent to the internal surface of the vessel. The left internal iliac was greatly inflamed, and the diameter so much contracted as to be almost impervious."

"In the above case we have to regret that nothing is said of the state of the limb from the 9th of July, when the 'unequivocal symptoms of phlegmasia dolens commenced,' till the patient's death. In the dissection, again, nothing is said of the pathological condition of the limb. The whole attention is concentrated on the vessels. Now it ought to have been Dr. Davis's chief and main object to prove, in all those cases, that the disease was really phlegmasia dolens, by an accurate description of the symptoms and state of the limb, and then to have traced the *cause* if he could. But it is evident that the first and main object is almost totally neglected—or where it is adverted to, as in Mr. Lawrence's dissection, it makes against the question—and therefore we do not consider ourselves bound to subscribe to our author's etiology, without having the necessary documents respecting the symptoms and dissections of the cases."†

We cannot, however, hesitate to believe, that the swelling spoken of was produced by the inflammation and obstructions discovered by dissection, as Ribes tells us it is one of the common symptoms of phlebitis; but we must deny that, that swelling, and the swelling attending phlegmasia dolens, are of one and the same kind, as this author expressly calls it, "œdematous."

* Dr. Francis relates a case on the authority of Dr. Mann of Boston, in which death took place from sphacelus, in consequence of the limb being punctured with a view to draw off the water supposed to be present.

† Med. Chir. Rev. p. 385.

From all the facts adduced by Dr. Davis in support of his pathology of phlegmasia dolens, sufficient evidence is not afforded, that "the proximate cause of this disease is a violent inflammation of one or more of the principal veins within and in the immediate neighbourhood of the pelvis," &c. Nor in our opinion is this pathology sustained by the cases related by Velpeau, purporting to illustrate the cause of this disease, though they coincide with the observations of Dr. Davis.

Dr. Velpeau has drawn the same conclusions as regards the proximate cause of phlegmasia dolens as Dr. Davis, though not aware he had been anticipated in this, by the latter gentleman. We will briefly relate his cases—that is, we will mention every circumstance which may bear upon the question.

Case I. Valette, eighteen years old, had a tedious labour; on the third day she was much affected by some melancholy tidings. She now laboured under an acute pneumonic affection. Eleven days after delivery, she had chills and fever, pain in the groins, hypochondria, and left side of the pelvis. On the forty-first day, the left leg was found to be swelled, with pain in the hip and groin, and ultimately in the whole limb. "The whole extremity *œdematous.*" Pressure give pain only in the groin. On the sixtieth day she died.

Dissection. "When the left extremity was cut into, it was found much infiltrated in the cellular tissue. The lymphatic glands of the groin were much swelled and red—the muscles small and pale"—crural vein red externally, and its cellular coat thickened. This was the case in all its deep-seated branches. Purulent matter was found in these veins, and pus in the cava, and purulent deposition in other places. Can any one recognise phlegmasia dolens in the history of this case, or in the details of the dissection? There was a swelled leg it is true—but it is expressly declared to be "œdematous," and this is the only resemblance.

Case II. Damiens, thirty-five years of age. She had a quick delivery. During the three first days nothing remarkable occurred. Fourth, fever, and deep-seated pain in the pelvis. On the thirteenth day the lower extremities are much swelled and painful, especially the left. Fifteenth, breathing affected, difficulty in passing water, diarrhœa. Twentieth, the lower extremities more swelled and *red*, (enflées et rouges,) belly swelled and painful. Twenty-sixth day, died. In the dissection there was nothing to justify the opinion that this was a case of phlegmasia dolens; or perhaps that it was a case of phlebitis.

Case III. Has even less claim to the title assumed for it, than the preceding—the only possible circumstance to rest such an opinion upon is, that "there were pains in the *upper* and lower extremities—the latter *beginning to show œdema.*"

Such are the kind of cases which of late have been foisted upon the medical public, for instances of phlegmasia dolens; than which, nothing can be less similar. Dr. Davis has evaded all the difficulties that might attach to a regular history of the appearances of the limb,

by declaring in some instances, that "*to-day unequivocal signs of phlegmasia dolens appeared;*" we must therefore take his word for the truth of the observation; not, however, that we would insinuate, that he would in the slightest degree misrepresent the appearances which led him to this conclusion, but that he was satisfied with symptoms which we think did not constitute the disease. The cases of Bouillaud and Ribes, are precisely of the same character as regards their relation to phlegmasia dolens, though they may be looked upon as instances of phlebitis. But to Velpeau, we cannot even accord this acknowledgment

We find also a case recorded in the Medico-Chirurgical Review, for 1825, Vol. III., New Series, p. 540, which purports to be a case of phlegmasia dolens, that required the amputation of the leg in consequence of an apprehended sphacelus. The only circumstance on which the title of the case is founded, is that "*the limb was* NOT *evidently swelled, but there was a good deal of tenderness in and about the ham.*" But unfortunately for Mr. Davies, the narrator of this case, he had just before informed us, that "*the limb became instantly paralyzed, from below the knee to the toes,*" by a sudden metastasis of "excruciating pain from the left loin and hip, which suddenly flew down to the leg and foot." On dissection of the amputated limb, "the veins were found completely distended with firmly coagulated blood; their coats were thickened, and their inner surfaces very much inflamed." In consequence of which, Mr. Davies declares, that "the morbid appearances tend to confirm the truth of Dr. Davis' views of the pathology of phlegmasia dolens." To which we might perhaps agree, if there had been a single symptom of this disease present; or if Dr. Davis had proved, that phlebitis, and phlegmasia dolens, were one and the same disease; or even, if in phlegmasia dolens, that phlebitis was constantly present. This latter, however, we confess, would have been a most difficult task, as the rare fatality of phlegmasia dolens, leaves but very scanty chances to do so; while phlebitis is very frequently fatal

Having thus reviewed the several opinions which have been offered on the proximate cause of phlegmasia dolens, we are every way assured, that they will appear to the greater part of medical practitioners, as unsatisfactory as they have to us; and, that they satisfactorily prove, that this interesting subject for pathological research, remains still unsettled. We have upon this subject but two suggestions to make; namely—1st, be the affection seated in whatever tissue it may, its character is highly inflammatory; 2d, that in our opinion, that this inflammation occupies exclusively the white lymphatic ves-

sels of the cellular membrane of the several textures of the limb; for we are every way satisfied that redness is not essential to inflammation, as we have elsewhere declared. We therefore agree in part with Dr. Hull, since he admits among the tissues he particularizes as being involved in this disease, the cellular membrane as one. And in support of the opinion we have adopted respecting inflammation, we think we cannot do better than to employ his arguments against redness being a *sine qua non* to its existence.

"Should it be objected to this theory that there is no redness of the external surface of the cutis, my answer is, that redness, though a general attendant of inflammation in the human body, does not constitute inflammation, nor is it a circumstance essentially necessary to inflammation. The cheek in blushing for example, presents redness, and increase of heat to the eye and touch; but there is no pain, consequently no inflammation. The cornea on the other hand, when we cannot trace a single vessel carrying red blood beyond its margin, is frequently affected with inflammation, there is pain, heat, &c., and small abscesses, or ulcers, or depositions of coagulable lymph, commonly called specks or pearls, take place in it. Animals which have no red blood in any part of their system, are not exempt from inflammation. And the less acute kinds of inflammation, which take place in the membranes of the brain, the pleura, peritonæum, tunica vaginalis, testes, &c., are not always characterized by an evident redness, especially when an extravasation of coagulating lymph, or a large effusion of serosity soon happens and moderates them, as in peritonitis *conjunctiva*, and in apoplexia *hydrocephalica* Culleni, and the acute stages of hydrothorax, ascites, and hydrocele. Hence it may happen, that when the symptoms of a disease induce the attending physician to consider it as a phlegmasia, dissection may be supposed to show, that he is mistaken as to the nature of the complaint, if redness be admitted as an essential mark, a *sine qua non* of inflammation."*

What the exciting causes may be of this disease, we are not exactly prepared to say, as it takes place in two diametrically opposite conditions of the system; namely, that of repletion, and of exhaustion. Thus, we have seen it in two highly plethoric females; with one the labour was rapid and easy; in the other it was rather tedious, and very painful. In several other, we have witnessed it to follow severe and extensive uterine hæmorrhages; and were we to decide from our own experience as to the frequency of its occurrence after any one condition of the system, we should say, it was most apt to follow severe uterine losses of blood, than from any other single cause.

Method of Cure.—However writers may disagree as regards the particular structure occupied by this disease, they are unanimous with respect to the nature of it—they all maintain it to be inflammatory. About this there can be no mistake; as all its symptoms and

* Hull on Phlegmasia Dolens, p. 209.

habits declare this condition of the tissue to be present. We have fever with a highly active pulse; a hot dry skin; acute pain and swelling, which is sometimes very hot; great, nay excessive soreness of the limb to the touch; great thirst sometimes; white tongue, &c. in a word, every thing that betrays an active local inflammation.

Blood-letting and leeching.—The means of cure consist in depletion from the circulating system, both general and local—we therefore abstract blood from the arm to the full extent the system will bear, at the time; and this must be repeated, if the fever be but little or none abated, and the pain be undiminished. So soon as the force of the pulse is diminished, if the fever continue, leeches should be applied to the diseased limb, in such number as shall secure the loss of five or six ounces of blood. Our practice in the use of leeches, is to have them pretty much dispersed over the surface of the limb, that their bites may not be too near each other; as they sometimes leave troublesome sores, when crowded together where the skin is much distended. The leeching may be repeated in a day or two, provided the pain, heat, and elastic feel of the swelling remain severe or unabated. We however never apply the leeches, until arterial force is weakened by bleeding from the arm; as the relief they afford, is by no means so great until this has taken place. In two or three cases we were obliged to repeat the bleeding six or seven times, and the leeching two or three, before the disease yielded.

Purging, &c.—In aid of blood-letting, we employ purging to a liberal extent, during the continuance of the active stage of the disease; and for this purpose, we prefer the saline cathartics; especially when combined with an equal weight of calcined magnesia; the following are the usual doses: ℞. sulph. magnes., magnes. alb. ust. aa. ʒiij. M. div. in iij. One of these portions is to be given every two hours, in a wine-glassful of sweetened water or lemonade, until they operate freely.

We have also found decided advantage in the nitrous antimonial powders, until fever is reduced, or perspiration established. The regimen, throughout the active stages of the disease, is to be strictly *antiphlogistic.*

Topical applications.—Much injury is oftentimes done, by the injudicious employment of stimulating embrocations or liniments; this should be peremptorily forbidden. No kind of application whatever should be made to the limb itself, until after the fever has abated and the pulse is reduced. When this is effected, the vinegar vapour bath may be used, two or three times a day, with great advantage; but not before.

The mode of employing this is as follows; the limb should be bared in the bed, and the bed-clothes be raised from it by means of a common hoop from a barrel, being cut in two and tied together at right angles with each other; this must be made to straddle the leg. Three bricks must be heated pretty hot, and then plunged in vinegar; after they are loaded with the vinegar, they may be folded in cloths, and one applied to each side of the limb, and the other to the foot. The bed-clothes must now be returned over the spider, to keep in the vapour arising from the bricks. This steaming should be continued until the patient complains of feeling weak; they are then to be removed. This process is almost certain to produce a copious perspiration over the whole extent of the limb. Should this however not be found to be the case upon examining the limb in fifteen or twenty minutes after the application of the bricks, but instead, the limb is found to be hot and dry, these articles should be removed, as they will not succeed if they are even allowed to remain, as the heat of the limb is beyond the *sweating point.*

When this happens we may be certain that the bricks have been applied too early—that is, before arterial action is sufficiently reduced. In this case, we must renew the depleting remedies, either general or local, or both. On this account, it is always well, to carefully examine the pulse before we have recourse to this remedy. But when perspiration is induced, the patient is almost certain to experience great relief, though temporary for some time, for the most part; it must therefore be renewed, whenever the pain becomes excessive.

Opium.—From pain, and that excessive, for the most part, being the constant attendant upon this complaint, it has been thought too generally, that opium in some form or other should be administered —but this in our hands has always been found highly injurious in the early, and active stage, of phlegmasia dolens. It should therefore never be given until the system is sufficiently reduced to bear this drug with advantage. And when it is eligible, the best mode of administering it, is by injection. And for this purpose a tea-spoonful of laudanum in a gill of warm water may be used as occasion may require. Or Dover's powder may be used at bed time in the dose of ten grains, when the system can bear with profit the stimulus of its opium, and especially when the skin is indisposed to perspiration.

As a general rule, the system will not bear the use of opium, as long as the swelling preserves its elastic character; and this is generally from six to eight days. Nor should any stimulating applications to the limb be resorted to until, the intumescence puts on the appearance of œdema; for until this change takes place, the active, inflam-

matory stage has not passed away. About the time above specified, (for we have known it happen earlier or be retarded later,) pain, heat, fever, and swelling, begin to abate, and the patient is able to support her sufferings with less complaint. She can now for the most part bear the limb to be moved, or its position changed, without so much torture though still very far from being relieved.

External applications.—We have always made the changes now spoken of, the guide for an additional application to the affected limb; (that is, when there is an abatement of the constitutional symptoms, and the swelling will retain the impression of the finger,) we now order a moderately stimulating embrocation, consisting of a beeves' gall mixed in three half pints of brandy, rum, or whiskey. With this the limb is to be bathed, (not rubbed,) two, three, or four times a day, as the patient can best bear it, having it a little warmed previously. We would here suggest a caution to the nurse, that is more important than might at first sight appear—namely, to literally bathe the part, and not to rub it. Very great mischief is oftentimes done, by not paying attention to this rule, in all local applications, for nothing but evil can follow the other mode, so long as inflammation, (however moderate,) continues to occupy the parts. But after this condition is removed, we believe that advantage may be derived by gentle friction, as it appears to contribute to absorption.

Blisters.—These remedies have been recommended by almost every writer on the subject of phlegmasia dolens—but why, we are at a loss to understand. For they are either not the appropriate remedies, or we have been very unskilful in their application. We have never had recourse to blistering but twice; and sorely did we repent each application. The disagreeable irritation produced by its operation in the first instance, and the tedious disagreeable ulcer that followed, we imagined might have been owing to some accidental condition of the system, or perhaps idiosincracy; this led us to a second trial, but we experienced the same inconveniences; since when, we have altogether abandoned their use. Before we ordered this remedy, it is but proper to state, that we thought we had reduced the system, to the proper blistering point; but on this we may have been mistaken. Besides, however the disadvantages just mentioned, arising from blistering, there are others which should not be lost sight of—namely, preventing other local applications, and especially the one mentioned above, which in our opinion is very much more useful; and secondly, by obliging the patient to maintain one position unnecessarily long, which is of no trifling moment to the invalid.

Bandaging.—This application has been recommended in phlegmasia

dolens by some practitioner, ab initio; but our own experience obliges us to say of it, that we have either been very unfortunate in our *lot* of patients of this kind, or if this be not so, that those, who have professed to have derived advantage from it, have mistaken œdema for phlegmasia dolens. For we certainly have never met with a case of this disease, that could bear without severe complainings the weight of the bed-clothes upon the affected limb, much less a tightly drawn bandage. We however must be honest, and confess, that we have ever been deterred from the application of the bandage in the early stage of the disease, from the presence of so much sensibility in the part; in the last stage, we have known peculiar benefit, derived from its use.

It is almost a constant sequence, that after all inflammation has disappeared, that the limb will remain swollen and feeble. For this condition, much advantage is derived from bandages, frictions with the dry hand, fumigating the limb with the smoke of burning rosin, and exercise in a carriage. The fumigation is conducted as follows; the patient's limb is to be placed across a tub, in the bottom of which there is a small chaffing dish with hot embers. A little powdered rosin is to be strewed upon the embers, and the fumes to be prevented from escaping by having a blanket spread over the limb and tub—this may be repeated twice a day.

It will be proper to observe that the limb should be kept a little elevated during the whole of the disease; this is best done by a board well protected by pillows, and placed under the leg, with its lower end raised as high as the patient's feelings will permit.

After the febrile symptoms have disappeared, the patient's diet may be a little more generous; she may take thin chocolate; a few oysters, chicken water, or soft boiled egg, &c.; and if there be much debility, any of the tonics in common use may be employed with advantage: and these will be aided by a well-regulated system of exercise, which must of course be left to the discretion of the physician, and to the circumstances of the patient.

ART. XI. *Some Account of a Case of Paruria Inops*, (GOOD,) *or Paralysis of the Kidneys.* By GEORGE HAYWARD, M. D. of Boston.

THIS disease, in which, according to Dr. GOOD, the "urine is unsecreted by the kidneys," and there is "no desire to make water, nor sense of fulness in any part of the urinary track," is of very rare occurrence. No writer but Sir HENRY HALFORD, that I am aware of,

has published any account of it; this circumstance, together with the fact that its termination is usually, if not always in death, induces me to submit the following details of a case that recently occurred in my own practice.

On Thursday, July 16th, 1829, at 1 o'clock P. M. I visited a lady in the fiftieth year of her age, the mother of several children, who complained of considerable nausea, with diarrhœa and slight pain in the stomach and bowels. She had been as well as usual till Tuesday evening, but since that time had been so much indisposed as to abstain from all food. Her indisposition she attributed to taking cold, from exposure on Monday night. She had formerly been a good deal of an invalid, having suffered severely from repeated miscarriages, but had for the last eight or ten years enjoyed a very tolerable share of health.

I found her tongue covered with an unusually thick coat, her pulse between seventy and seventy-five in a minute, moderately strong, and her skin cooler than in health. I directed a gentle emetic of the wine and powder of ipecacuanha, to be followed by castor oil, and the dejections to be restrained by opium, if they were excessive.

On Friday morning I learnt that the emetic had operated thoroughly but mildly, and that she brought from her stomach food in an undigested state, that was taken on Tuesday. Her bowels had been so frequently moved as to render it necessary to give her three grains of opium at intervals. She was somewhat stupid, which at the time was attributed to the opium; the coat on the tongue remained about the same. She still complained of nausea; though she was free from pain; the pulse was slower than on the preceding day, and the temperature of the skin was diminished. At this visit, she told me that she had passed no water since early on Wednesday morning, but that she had no desire to do so, and no pain or inconvenience from it. On passing my hand over the bladder, I satisfied myself that it was not distended; I directed her to take one drachm of a mixture of three parts of the liquid acetate of ammonia, and one part of the spirit of nitrous æther, every two hours, and to let me know in the afternoon if she had not evacuated the bladder in the interval. I was sent for in the afternoon, as no water had been passed; there was still no suffering, and the bladder was not distended. I then introduced the catheter, and drew off about half an ounce of urine of a very healthy character. The patient was more drowsy at this visit than I had seen her at any previous one, and being now convinced that the whole trouble arose from a want of secretion of urine, I stated to her family that I considered her situation an alarming one, and

that the disease would probably have a fatal termination. This surprised them, as her strength was good, she was without pain, and conversed freely, when roused from the stupor to which she was inclined.

I now directed a large blister to be applied over the kidneys, fomentations of hot herbs in spirit above the pubis, sinapisms to the feet, and stimulating frictions to the whole surface of the body, with a continuance of the diuretic mixture.

On Saturday morning all her symptoms were aggravated; the pulse slower, the skin colder, and the coma increased. The tongue remained coated, there was no appetite for food, and no water had been passed. A powder, composed of one grain of the sub-muriate of mercury, five grains of the nitrate of potash, and a scruple of cream of tartar, was ordered to be given every two hours, and the medicine that had been before directed was to be taken in the intermediate hours, and the other remedies were continued. No improvement took place during the day; on the contrary, the coma increased, the pulse became slower and more feeble, and the temperature of the skin was diminished.

Finding all her symptoms worse on Sunday morning, I directed ten drops of the tincture of cantharides and capsicum to be given every two hours, instead of the mixture of the spirits of nitre and Mindererus, and the other remedies to be continued. At this visit I passed the catheter, and drew off about an ounce of healthy urine. At 3 o'clock P. M. Dr. Warren saw her with me; she was now so comatose that it was impossible to rouse her, and her pulse had sunk very considerably since morning.

Dr. W. advised to give one drachm of the tincture of cantharides and capsicum every two hours, to rub along the whole course of the spine with the same, and to continue the use of the other means. The medicine was given and the other directions followed till eight o'clock in the evening, when she became unable to swallow, her pulse ceased at the wrist, the surface of the body became cold, and the breathing stertorous, and at long intervals; and in this state she continued till Monday evening, at seven o'clock, when she died.

Sectio cadaveris, twenty-three hours after death.—The examination was made in presence of my friend, Dr. Homens, of this city.

The general appearance of the body was natural. On dividing the scalp from ear to ear, and dissecting it from the cranium, no fulness was discovered in the vessels of the integuments, and scarcely any blood was effused. The brain and its membranes were found to be

in a perfectly healthy state, there was neither effusion nor congestion, but all the appearances warranted the conclusion, that the morbid symptoms were owing to the quality of the blood, rather than to its quantity.

There was no mark of disease in the stomach, intestines, liver, spleen, or uterus. The kidney of the right side was about half the usual size, and a third part of it at least was of a deep purple colour, exhibiting traces of considerable inflammation, apparently recent. When cut into it emitted a strong urinous odour.

The left kidney was not larger than a small English walnut, but of a healthy appearance, and free from any urinous odour. Both the ureters were somewhat inflamed. The bladder did not contain a drop of urine; the mucous coat was nearly black, appearing to have been the seat of violent inflammation. Whether this was the case, or whether the inflammatory appearance about the ureters and bladder was to be attributed to the absence of urine, the usual stimulus of the parts, is a point which I feel unable to decide.

As this disease so rarely occurs, and as all the cases that have come to my knowledge have terminated fatally, I shall be excused perhaps for adding a few remarks. The only printed account of this singular affection which I can find, is the one by Sir Henry Halford, referred to in the beginning of this paper. It was published in 1820, in the 6th volume of the Transactions of the College of Physicians, in London. It appears that he had never seen but five cases. They differed in some respects from the one above detailed. "All the patients were fat, corpulent men, between fifty and sixty years of age." "In three of them there was observed a remarkably strong urinous smell in the perspiration twenty-four hours before death." Nothing of this kind was discoverable in my patient.

In Sir H. H.'s patients no urine whatever was secreted; and he remarks, that "if any water, however small the quantity, had been made in these cases, I should have thought it possible that the patients might have recovered; for it has often surprised me to observe how small has been the measure of that excrementitious fluid which the frame has sometimes thrown off, and yet preserved itself harmless; but the cessation of the excretion altogether, is universally a fatal symptom in my experience, being followed by oppression on the brain."

From my patient, it will be recollected, that a small quantity of water was drawn off on Friday afternoon, and again on Sunday morning, showing that some secretion had taken place, which proves

that the conjecture in the above quotation, as to the favourable termination of this disease under such circumstances, is unfortunately not to be much relied on.

The disease he denominates paralysis of the kidneys, and till something more is known of it, this name will answer perhaps as well as any other, though if it were fair to draw any conclusion from a single instance, it might be inferred, from the appearances in my case, that the paralysis was consequent on an organic affection. It does not appear that he made any examinations after death, nor has he detailed his method of treatment. Whether this affection is under the controul of any remedies we possess, remains to be proved, but hitherto all attempts to check it have been unavailing.

The slow and feeble pulse of my patient, the temperature of her skin, which was below the ordinary standard, and the entire absence of pain seemed to forbid all depletion, but indicated the administration of stimulants, such especially as would act on the urinary organs. But I must confess that nothing that was administered appeared to have the slightest effect in relieving the patient; and if another case should fall under my care, though I know not what different treatment I could pursue, yet I should feel but little encouragement in adopting my former plan.

Death in these cases is no doubt owing to the impure state of the blood, arising from the failure of the kidneys to perform their usual secretion. The circulating fluid, when it is first received from the lacteals, is in a state wholly unfit to support the vital functions. It is an important part of the office of the lungs, skin, and kidneys, to purify it, and if the customary action of these organs be partially interrupted, alarming consequences ensue, and a complete suspension of their functions produces death. This is well known with regard to the lungs. The immersion of the body into carbonic acid gas, is followed by an immediate suspension of vitality, and unless the lungs are soon supplied with respirable air, death is the consequence. The cause of this is, that the pulmonary organs, when deprived of vital air, are unable to effect that peculiar change in the blood which should take place in them; the blood is then sent to the left side of the heart in a state unfit for the purposes of life.

A similar effect, though less sudden, would be produced if there should be a total suspension of the action of the skin, and a failure on the part of the kidneys to perform the office assigned to them, is followed by like consequences. There is a great similarity in the morbid effects arising from these different causes, because the brain

is in each case the organ primarily affected. To enable it to perform its functions well, it must be regularly supplied with what is called arterial blood, that is, blood that has been freed of its excrementitious part. But when impure blood is sent to it, it instantly ceases to act if the impurity be great, and immediate death is the consequence. If the noxious principles have been in part removed by the lungs, skin, and kidneys, the effects are not so sudden or violent; coma, however, usually comes on, which gradually increases, if the cause continue, till it terminates in death. When the kidneys, therefore, fail to secrete urine, and thus rid the blood of a part of the excrementitious matter which it contains, the functions of the brain are soon disturbed, and death ensues, unless, as sometimes happens, another organ performs a vicarious office for them.*

Boston, August 8th, 1829.

ART. XII. *Remarks on the use of Spirit of Turpentine in Incarcerated Hernia.* By C. B. HAMILTON, late Surgeon of the Marine Hospital at Washington City.

IN the last number of this Journal I have noticed a paper, by Professor SEWALL, on the use of the spirit of turpentine internally as a remedy in incarcerated hernia. In his concluding paragraph the professor observes, "it requires the experience derived from many cases, to entitle a new remedy to confidence:" and it may be added that a proper application of a remedy to those diseased conditions of the system, in which, from analogy and reason confirmed by experience, it is found to prove beneficial, is equally necessary to sustain that confidence when it is acquired.

I have for many years used the spirit of turpentine in incarcerated hernia, without being aware that it was a new remedy, and without its being in every instance successful, for in one case in which I employed it as a dernier resort, upon the patient's positively refusing to submit to an operation, no mitigation of the disease, but rather an

* [The preceding case of a disease of unfrequent occurrence, is by a distinguished and judicious practitioner, and presents many points of interest. We may be permitted, however, to remark, that we have been led to entertain different views of the pathology and treatment of the disease, from those of our esteemed correspondent, and we shall probably take an early opportunity of laying them before our readers.]—ED.

aggravation of suffering, resulted from its exhibition. This was a case of omental inguinal hernia, and the patient died with all the symptoms of supervening mortification. That the hernial sac contained a portion of omentum only, I inferred from the bowels yielding to the operation of purgative medicine, which could not have been the case, had a portion of the intestinal tube been shut up by the stricture: the stricture in this case was in the tendon forming the ring, and therefore beyond the immediate influence of a remedy applied to the stomach. Among the earlier recollections of my boyhood, is the use of the spirit of turpentine in spasmodic or flatulent colic, and a case that came under my observation when about ten years of age, served to fix its use in this disease indelibly on my memory. This was a case in which an uterine inflammation succeeding to concealed abortion, in the person of a servant girl, was mistaken by her mistress for colic, and the turpentine administered with the most melancholy effect.

Being called to a case, some years ago, of strangulated scrotal hernia of but a few hours standing, which, from the great distention of the strangulated bowel by flatus and excrement, resisted all my efforts at reduction by taxis, I was naturally led to speculate upon the cause of so great and sudden an accumulation in the gut. It struck me that if the occluding stricture existed in the abdominal ring, it must necessarily act alike upon the descending and ascending portions of the intestine, and that of course nothing could be derived to the incarcerated portion from that within the abdomen, to give it the volume it possessed. It therefore occurred to me that the descending portion of the tube was free, and that the distention was caused by a stricture taking place in the muscular fibres of the ascending portion, and arresting the passage of the contents of the bowels brought down by the peristaltic motion. Considering this state of things to differ in no particular from that which takes place in spasmodic colic, I at once resolved to make trial of the turpentine, the good effects of which I had so often witnessed in the latter disease, and it succeeded beyond my most sanguine anticipations. In a few moments the contents of the strangulated bowel were spontaneously removed, and the intestine restored to the abdominal cavity by taxis, with perfect ease.

About twelve months since, I was called to a coloured man, the property of John Addison, Esq. of this district. On my arrival, I was informed by his master that he had been for many years afflicted with scrotal hernia, that he had been in the habit of reducing it himself, that a few hours before he had been seized with severe pain in

the part, and that the rupture now resisted his usual efforts to reduce it. On examining the patient, I found the scrotum so enormously enlarged that no trace of a penis could be seen; the integuments were cold to the touch, and the swelling elastic. The patient informed me that a short time before the attack of pain, he had eaten a quantity of unripe fruit, and ascribed his situation to that cause. Without making any attempt at reduction, I enquired if there was any spirit of turpentine in the house, and fortunately about the half of a common-sized wine-glassful was produced, which I immediately administered. The relief was instantaneous: the spasm was removed; the air and fæces, by the elastic pressure of the intestine, was carried upwards with a gurgling sound into its continuous portion within the abdomen, and in five minutes after, the patient with his own hand, reduced the rupture.

I have made these remarks for the purpose of directing the attention of practitioners to what I consider to be the only condition of the parts, (which, by the way, might, I conceive, be properly termed a scrotal colic,) in which the turpentine proves an invaluable remedy, and to express my opinion of the impropriety of administering it in those cases where the obstruction arises from a stricture of the tendon forming the abdominal ring, or from chronic enlargement of the incarcerated viscera.

ART. XIII. *Remarks on the Excision of Cartilago-bony Substances from the Knee Joint, with a Case.* By SAMUEL C. BRADBURY, M. D. of Bangor, Penobscot County, Maine.

IN his observations on the excision of cartilaginous substances from the knee joint, after speaking of "the perilous symptoms sometimes following wounds of the knee joint," Mr. SAMUEL COOPER says, "Small as the chance is of losing the limb, and even life, in the attempt to get rid of the disease, since the inconveniences of the complaint are in most cases very bearable, and are even capable of palliation by means of a bandage, endangering the limb and life in any degree must seem to many persons contrary to the dictates of prudence." But the same surgeon says further, "If a man be deprived of his livelihood, by not being able to use his knee; if he cannot or will not take the trouble of wearing a bandage; if he be urgently desirous of running the risk of the operation, after things have been impartially

explained to him; if a bandage should not be productive of sufficient relief; and lastly, *if excessive pain, severe inflammation of the joint, a great deal of symptomatic fever, and lameness, should frequently be produced by the complaint, I think it is the duty of the surgeon to operate.*"

Now it appears to me, these are the very circumstances under which the operation would most likely be followed by perilous symptoms. That cutting into a joint already much inflamed,* or, if I may use the expression, in a state tending to inflammation, with high symptomatic fever, and perhaps in a highly irritable or even tainted constitution, should be followed by still greater inflammation and danger, is what every surgeon might expect; and if the operation in question, has sometimes "been followed by a violent inflammation, fever, and death itself," I think it may have been because it was performed on an improper subject, or at an improper time, or in consequence of improper treatment afterwards. It would seem that the most favourable circumstances for the operation are a sound, healthy constitution, and entire absence at the time of inflammation in the joint; and in this state of things, while the patient remains in a pure and healthy atmosphere, however dangerous or fatal the operation may have proved under opposite circumstances, or in crowded and tainted hospitals, I cannot believe the operation so hazardous as Mr. Cooper and others would have us believe; and I trust experience will prove, that excision is the only sure and comparatively safe mode of relief, in cases such as the one I am about to describe. By delay, in tampering with knee-caps and bandages, in such cases we every day endanger the production of the state of things above described by Mr. Cooper: a state at least as dangerous to the limb and life, as the operation, performed at a proper time on a suitable subject, can be; and a state which may forever preclude the reasonable hope of relief by the operation.

Case.—Oliver Brooks, of Newport, farmer, aged twenty-five, of robust constitution, consulted me on the 14th of July last, with two preternatural bodies in the joint of the left knee. They were easily moved in different directions about the joint, and from one side of the patella to the other. The complaint was brought on about two years before by a severe strain, which laid him up for several weeks. At

* [It appears to us, that our correspondent has misapprehended Mr. Cooper in supposing that he recommends the operation *during the existence of inflammation* in the joint, and we might adduce in evidence of this, several observations, from the same article in his Surgical Dictionary, quoted in the preceding paragraph.]—Ed.

the time of consulting me, there was no inflammation or lameness of the joint, except when in exercising the limb these extraneous bodies came in certain positions of the joint. This he said, would always happen on attempting to walk any considerable distance, and sometimes throw him down, as he expressed it, as suddenly as though he had been shot; causing severe pain and fainting at the time, and a degree of inflammation in the joint, which would occasionally confine him from his labour for several days.

I advised an operation, which was consented to, and which was performed in the following manner:—

The patient, sitting in his chair, with the limb extended, and the heel on the floor, brought both the substances together, at the outer side of the articulation near the superior attachment of the capsular ligament, and assisted in confining them. Drawing the integuments a little towards the patella, I divided them in a longitudinal direction to the extent of an inch and a half, and then carefully made an incision through the capsular ligament, over the extraneous bodies, of a sufficient size for their exit. The wound was then accurately closed by adhesive plaster, compresses, and the uniting bandage. In two hours after the operation, a very severe pain came on in the knee-joint, shooting up to the hip, which was only relieved by large and repeated doses of laudanum and ether. In two or three hours more the pain entirely subsided, and never in any degree returned. The patient was kept in a horizontal position, with the limb constantly extended, for the first forty-eight hours. A strictly antiphlogistic regimen was enjoined, and as he had undergone no previous preparation, on the second day free evacuations from the bowels were procured by Epsom salt. No inflammation or fever followed the operation, the appetite remaining unimpaired and sleep uninterrupted. On the third day, contrary to express directions, the patient walked on the limb for some distance, and in one week from the time of the operation resumed his usual labours, the joint being kept supported for some weeks with a large plaster of simple diachylon. The wound was but partially healed by the first intention; but soon healed entirely, and has since been perfectly well.

In this case the place of the incision was chosen, because the substances were not so easily brought together, or retained in any other position. The largest of these bodies was of a triangular shape, its longest side seven-eighths of an inch, and three or four lines in thickness, the outside cartilaginous and convex, the inside flat and bony.

Bangor, Penobscot County, Maine, August, 1829.

ART. XIV. *Case of Gun-shot Wound, with Remarks.* By J. W. HEUSTIS, M. D. &c. of Cahawba, Alabama.

ON the 16th of January, 1824, L. Roberts, of this place, was shot by the discharge of a small cannon, on board one of the steamboats, used as a signal for arrival and departure. He was standing with others on the bank of the river, and the piece being pointed incautiously to the shore, wounded by its discharge the subject of this article, in the back. It was supposed that the wadding of the gun was made of some old clothes having buttons on them, from the circumstance and appearance of the wound, which was on the right of the spine, just below the crest of the ileum, about the size of a quarter of a dollar. Upon examination, it appeared that the intestinal canal was broken, as the contents of the bowels were discharged freely at the wound. The place was dressed, and quietude and a recumbent posture were enjoined. Having a patient some miles distant, I did not see Roberts again until the next day. On my return, I was told that a consultation of physicians had been held upon his case, which was considered desperate, and that, with the approbation of the patient, they had come to the conclusion of opening the abdomen, searching for, taking up, and sewing together the wounded portion of intestine. The physicians who held this consultation, were gentlemen highly respected in their profession and by society at large. As they made known to me the result of their deliberations, I begged leave to differ from them in opinion, as the practice proposed was unauthorized by example, and at variance with the advice of the best surgical writers on the subject. Had the injured extremities or portion of intestine protruded from the wound, there could then have been no objection to uniting by suture the lacerated bowel, having previously peared off the jagged and deadened circumference, and then securing it to the external orifice. But here we should have been operating completely in the dark; a considerable thickness of adipose and muscular substances would have been required to be cut through before the intestine could be arrived at; besides, the bowels might have been wounded in more places than one, and the situation of these wounds was therefore a matter of uncertainty? The search might have been tedious and unsuccessful, or if successful, and the injured part had been properly united and secured, was there not reason to apprehend that such an extensive wound, the exposure of the abdominal cavity, and rough handling, would bring on dangerous or fatal inflammation of the peritoneum and intestines? I gave it as

my opinion, that, however small it might be, the patient's only chance consisted in avoiding an operation so dangerous and uncertain, and, with proper medical treatment and external dressings, leaving the event to the curative operation of nature; to that *vis medicatrix*, so surprisingly presiding over human health and existence, from the first quickening of animal life to its final extinction. My advice was taken. The patient was laid upon a mattrass, on his back, partially inclined to the injured side; and as the contents of the bowels escaped by the wound, a corresponding hole was cut through the bedding, and as much cleanliness preserved as the nature of the case would admit. He was now regularly attended and dressed by Mr. Hogan, a student of Dr. Casey's, and myself, every day. No alarming general symptoms ensued; though for nearly three weeks substances taken by the mouth and enemata, were discharged in greater or less quantity by the wound. At length the residuary mass began to resume its natural channel, the external wound gradually healed and contracted, and a portion of the crest of the ileum, of the size of the finger, presented and was extracted from the external opening. Finally, the wound in the course of four or five months healed up entirely, and the man has since enjoyed very sound and comfortable health.

It is scarcely necessary to say, that in the treatment of this case nothing but gentle laxatives, enemata, and the mildest articles of diet, as soup and gruel, were allowed. The patient was an old soldier, a man of much firmness and resolution, and upon whom calamity, or the prospect of death, appeared to make little or no impression.

Against the practice of opening the patient and searching for the wounded intestine, Mr. John Bell makes the following judicious observations. "When there is a wounded intestine, which we are warned of only by the passing of the fæces, we must not pretend to search for it, nor put in our finger, nor expect to sew it to the wound, but we may trust that the universal pressure which prevents the great effusion of blood and collects the blood in one place, that very pressure which always causes the wounded bowel and no other to protrude, will make the wounds, the outward wound and the inward wound of the intestine oppose each other, point to point, and if all be kept there quiet, though but for one day, so lively is the tendency to inflame, that the adhesion will be begun which is to save the patient's life."

A case similar to the one above, is given in the New York Medical Journal for December, 1828, p. 574, from the Memoirs of the American Academy of Arts and Sciences; and similar instances are recorded by a variety of authors.

It might be supposed that wounds penetrating the intestines through the parietes of the abdomen, would prove generally and necessarily fatal, yet even against this, nature has in a great measure guarded, by leaving no vacuum or unoccupied space within the general peritoneal cavity, and by the uniform and equable pressure and support which the diaphragm, the abdominal parietes, and the contained viscera afford each other. When the stomach and bowels are in a state of repletion, they are applied in close contact to the peritoneal envelope, and when the former are empty, this contact and adaptation are preserved by the contraction and elasticity of the latter: besides each convolution and portion of the intestinal canal has its appropriate location, so that in case of injury, the external wound corresponds with the internal.

Another way in which nature consults her own safety and preservation, is by the process of adhesive inflammation. One of the chief and the essential means of reunion, in cases of solution of continuity in the animal body, is the deposition of lymph, which becoming organized by the formation of new vessels and nerves, unites and envelopes contiguous surfaces and parts; so that in case the wounded portion of intestine, by rest and position can preserve its natural adaptation to the external opening for a few hours, the danger and possibility of displacement is effectually guarded against and prevented. "Soldiers," says Mr. John Bell, "recover daily from the most desperate wounds; and the most likely reasons that we can assign for it, are the fulness of the abdomen, the universal, equable, and gentle pressure, and the active disposition of the peritoneum, ready to inflame with the slightest touch. The wounded intestine is, by the universal pressure, kept close to the external wound, and the peritoneum and intestine are equally inclined to adhere. In a few hours that adhesion is begun which is to save the patient's life, and the lips of the wounded intestine are glued to the lips of the external wound. Thus is the side of the intestine united to the inner surface of the abdomen, and though the gut casts out its feces while the wound is open, though it often casts them out more freely while the first inflammation lasts, yet the feces resume their regular course whenever the wound is disposed to close."

Although nature thus guards against the effusion of the contents of the bowels into the cavity of the abdomen, yet we can readily suppose that this may sometimes be prevented by the severity and extent of the wound, dividing the intestines to such a degree, or in such a situation, as to cause their contents to be immediately discharged within the general cavity; this will be the more liable to happen

should the alimentary canal be in a state of repletion and distention. Numerous cases are recorded by surgical writers, in which persons have been stabbed and shot through the body without fatal consequences, and sometimes without being followed by any serious or alarming symptoms. It is very probable that in some instances of this nature, the slippery and mobile convolutions of the bowels may elude the ball or the point of the weapon, yet in many, and perhaps the majority of cases, there can be little doubt that the intestines have been wounded to a greater or less extent, and that the discharge of matter from them into the general cavity of the abdomen is prevented by that uniform and equable pressure and support afforded by the juxta position and adaptation of contiguous and surrounding parts, and as already stated, the adhesive inflammation which speedily takes place, prevents all danger of effusion after the lapse of a few hours.

I am aware that in these observations I have little claim to originality, yet as a bare detail and history of isolated cases without suitable remarks and explanations is comparatively uninstructive, the above considerations, I trust, will not be thought unappropriate.

Cahawba, July 15th, 1829.

ART. XV. *Case of Immobility of the Jaw, successfully treated.* By VALENTINE MOTT, M. D. Professor of Surgery in Rutgers Medical College, New York.

DURING the last winter, a young man about twenty-one years of age, from North Carolina, called upon me with the lower jaw almost immoveably fixed to the upper. There was not the least motion to be discovered in a downward direction, nor was the most powerful effort with the hand upon the chin, able in the slightest degree to alter its situation.

He had been in this deplorable state for between ten and eleven years. Unable during that time to chew a mouthful of food, he introduced all the solid aliment which passed into his stomach through an opening on the right side, occasioned by a small aperture from an irregularity of the bicuspides teeth.

On the left side, just within the angle of the mouth, and opposite the situation of the cuspidatus tooth, a very firm band was to be seen and felt, reaching from this point along the alveolar ridge to the coronoid process. It was of more than ligamentous hardness.

Along the whole course of this adhesion of the cheek to the gum of the lower jaw, there was not the vestige of a tooth; and he stated

that from this part a large piece of the jaw had been formerly separated with the teeth attached to it. This morbid adhesion had been several times freely divided, but no depression of the lower jaw could be effected. It was cut from within the mouth in different directions, but never allowed the least motion to the jaw.

From his being able to give a little lateral motion to the lower jaw, I felt encouraged to hope, that some relief might be afforded him, and that his mouth, by some powerful efforts, might yet be opened. He consented with great cheerfulness to any operation which I thought could be performed, to enable him to receive food with more satisfaction, and restore the power of speaking, which was also very much impaired. If this could be accomplished, it would, moreover, very much improve his expression generally, as his face had become very much contracted and mis-shapen.

Seated in a chair, I made an incision from the angle of the mouth on the left side, through the cheek, and carried it to near the edge of the coronoid process, dividing the firm cicatrix within completely. Then cut the adhesion freely from the upper and lower jaws, so as to relieve the jaws entirely from all restraint from that cause. A piece of very broad tape was now conveyed between the teeth by means of a probe and spatula, and tied some distance below the chin. The head was now firmly held, and with all the force I could exert in the loop of this tape, not the least yielding of the lower jaw could be discovered.

As no force which I could exert would enable me to open the mouth, I was prepared to apply the mechanical principle of the screw and lever. For this purpose we had prepared an instrument composed of two steel plates, about three inches in length. When applied to each other they were of a wedge shape. To the large end was attached a screw, with a broad handle, which, when turned, caused the thin extremity of the plates to expand. (See figure.) This powerful combination of the lever and screw enabled us to open the mouth completely.

With considerable difficulty we succeeded in insinuating this *vice* between the range of teeth on the left side, being careful to have it rest along their whole course as much as possible. It was then expanded by turning the screw, and such was the report that attended the yielding of the lower jaw, that several exclaimed that the jaw was broken; but to me the noise was like the laceration of ligaments, and not such as attends the fracture of a bone. The mouth was immediately opened to a sufficient extent.

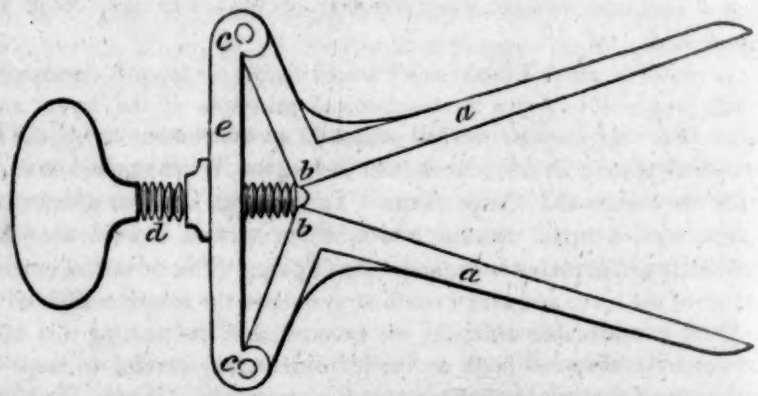
The wound of the cheek was closed with three interrupted sutures, aided with strips of adhesive plaster. From the mouth being kept constantly open for several days, by the instrument secured between

the teeth, it occasioned much strain upon the stitches, and made the adhesive strips of material importance.

Either the instrument or a soft piece of wood was placed constantly between the jaws to keep the mouth sufficiently open until the cheek had healed. During this time he received his drinks and liquid nourishment from a spoon or the spout of a tea-pot. When in this way they were conveyed well towards the base of the tongue, he was enabled to swallow without much inconvenience.

As soon as the external wound in the cheek was healed, the instrument was removed, except at night, and occasionally during the day, and he was now permitted to move the lower jaw. To prevent the cheek from adhering to the jaws internally, pieces of sponge were constantly interposed. To enable the jaws to approximate, it was necessary to remove the last molar tooth of the upper and lower jaw of the left side. Several of the incisors were of the most extraordinary length, and required to be filed off before a proper use could be made of the others.

He gradually acquired the power of closing the jaws, and was greatly delighted with the result of an operation which enabled him to chew his food, and enjoy his meals as other persons, which had given proportion to his features, and the ability to converse and articulate distinctly.



Explanation of the Figure.—aa. the two levers bent at right angles, and united to the fulcra *cc.* by a joint. *d.* the screw passing through the centre of the bar *e.* and acting upon the angles *bb.* which are notched to receive its point.

New York, 25 Park Place, September, 1829.

P. S. Since the above was written, I have successfully operated in a similar case, using the same instrument, upon a gentleman from Louisiana.

MEDICAL EDUCATION AND INSTITUTIONS.

ART. XVI. *Account of the Hôvital des Vénériens at Paris.* By ELISHA BARTLETT, M. D. of Lowell, Massachusetts.

THE hospitals of Paris which remain to be noticed, are devoted to the reception of certain classes of patients, and to the treatment of some particular classes of disease. They are of course less general in their destination than those, of which we have already given some account in this Journal. Among the most important of those referred to, are the *Hôpital des Vénériens* and the *Maison de Santé*, intended exclusively for the treatment of venereal affections; the *Hôpital St. Louis*, appropriated to the reception of patients with cutaneous diseases; the *Hôspice de l'Accouchement*, called the Hôspice de la Maternité, for lying-in women; the *Hôpital des Enfans Malades*, for sick children; the *Hôpital des Enfans Trouvés*, or Foundling Hospital; one establishment for incurable men, and one for incurable women. The present paper will contain a notice of the Hôpital des Vénériens.

When the venereal disease first made its appearance in Paris, during the reign of Charles VIII. the patients were sent to the "Hôpital des Petites Maisons." Under the reign of Louis XIV. they were sent to Bicêtre. The following account of the manner in which patients afflicted with this disease were treated, will not be uninteresting. It would be almost impossible to believe in so horrible a state of things under the reign of the illustrious Louis—the monarch celebrated for the patronage he bestowed on learned men and benevolent institutions, and who has given the name to his age—were it not attested by the Report of the General Council of Hospitals, published in 1816. As many as eight patients were laid on the same bed; or rather a part of them remained extended upon the floor from eight o'clock at night till one in the morning, when they changed places with those who had occupied the bed. Twenty or twenty-five beds served commonly for two hundred persons, of whom one-third died. This was not all. The patients, according to a decree of the administration, were chastised or *flogged*, (fustigé,) both before and after their treatment. This abominable state of affairs continued till the eighteenth century, and M. CULLERIER cites a deliberation of 1700, which renews expressly the order to *fustigé* the patients!

The disease was afterwards treated at the Hôtel Dieu and at Salpêtrière. Children born of infected mothers, were received with their mothers into the Hôspice de Vaugirard.

In 1784, the ancient convent of the Capuchins of the Faubourg St. Jacques, was converted into a venereal hospital. This establishment is airy and extensive, and embellished with gardens. Two sides of it look out upon the country. In 1785, the patients from Bicêtre were transferred to this hospital, then those from Vaugirard, and in 1792, the new hospital was in a situation to receive all who were destined to it. Many improvements were made from 1802 to 1805. The mortality from the foundation of the hospital for ten years, was one in forty-seven for the men, and one in forty-eight for the women. The number of women entered during this period was more than 12,000; the men, 9,342. Since 1801, for some years the mortality has been much more considerable. In 1802, it was one in fourteen; in 1803, one in fifteen. In the ten years dating from the 1st of January, 1804, the number of patients received into the hospital was 27,576: men, 13,638; women, 12,163; boys, 794; girls, 981. The number for the four last of these years, was much greater than for all the others. In the four years from January 1st, 1810, the number was 13,765: men, 7,184; women, 5,773; boys, 337; girls, 471. The deaths during these ten years was 1,170, almost one in twenty-four. There was a great disproportion between the mortality of the children and of the adults. In the children it was one in two and a half. There is also connected with this hospital an external and gratuitous treatment, of which the regular exercise commenced in 1808. The number of patients who have received this gratuitous treatment, has increased each year. In 1809, it was 978; in 1811, it was 1400; and in 1813, 1509. The council general gives a curious table of the men of each trade who have had recourse to this treatment. It results from this table, that those most subject to the disease are shoemakers and tailors. After them come bakers, carpenters, joiners, weavers, and masons. Those who appear less liable to this malady are the water-carriers, barbers, and glaziers. In 1811, there were 161 shoemakers, 131 tailors, 55 bakers, 49 carpenters, 59 joiners, and 25 weavers; while in the same year there were but 5 water-carriers, 10 barbers, and 11 glaziers. The year 1813 gives nearly the same proportion.

Statistical Table of the Hôpital des Vénériens, for 1822.

	Men.	Women.	Nurses.	Children with Nurses.	
				Boys.	Girls.
In the hospital, January 1st, 1822.	164	186	36	28	19
Admitted during the year.	1,108	1,479	124	84	91
Deaths.	9	16		34	25
Remaining, 31st December, 1822.	185	260	30	32	17

The ages giving the most patients were from seventeen to twenty-eight years. The greatest number of female patients were from among the laundresses, embroiderers, mantua-makers, and domestics. It will be seen that out of eighty-four deaths, fifty-nine were children.

This hospital is devoted to the exclusive treatment of syphilitic diseases, and of affections depending upon them. It is confided to the care of MM. CULLERIER, uncle and nephew, and to Professor BERTIN.

"Numerous researches," says M. Ratier, "made by the physicians who have the care of this institution, have resulted in the establishment of the following body of doctrine. Notwithstanding the different forms which the syphilitic malady assumes, the principles of its treatment ought always to be the same. They are only modified as the affection is primary or consecutive. The local treatment varies according to the severity of the symptoms. Mercury is considered here as a specific against syphilis, and those cases where it does not succeed are exceptions which do not affect the general rule. During a long period of time this substance was considered the only remedy, but observations made in Spain and Italy, have proved that vegetables, and especially sudorifics and a warm climate, have cured the disease without mercury. The ptisan of Feltz, which is much used in this hospital, ought not to be considered a beverage purely vegetable, for besides the various plants which enter into its composition, there is added isinglass, and a preparation of antimony, which always appears to contain a variable proportion of white oxide of arsenic. Some facts, and especially experiments made at the Hôpital St. Louis, in different cases of venereal eruptions, seem to prove that this oxide very much increases the efficacy of the ptisan of Feltz.

"When it is necessary to combat the primitive symptoms, the liquor of Van Swieten, which is a tincture of corrosive sublimate, is used, and constitutes the most ordinary treatment. The tincture is an extemporaneous preparation, in order to avoid the decomposition of the sublimate. M. Cullerier thinks that the liquor of Van Swieten does not deserve the reproaches it has received, and that whatever accidents it has produced, have been occasioned by its improper administration, and by the existence in the patient of a chronic gastro-enteritis, or a predisposition to pulmonary disease. If the patient is afflicted with cough, or exhibits symptoms of phthisis, or if the abdomen is the seat of some irritation, so that the liquor produces pains of the stomach and vomiting, M. Cullerier makes use of mercurial frictions, or of some other preparation of mercury by the mouth.

"If a patient presents himself with secondary syphilitic symptoms, from the entire confidence which M. Cullerier has in the liquor, he still administers it, and with a success so remarkable, that it may be said if the disease sometimes resists the remedy and continues to progress, it may be attributed to the negligence of the patient in pursuing the course of treatment. In constitutional syphilis, M. C. also considers mercurial frictions an efficacious remedy, and he employs them indifferently with the liquor of Van Swieten. He uses them in

those cases where the patient does not well bear the last preparation. When he administers the liquor in inveterate venereal affections, he usually unites with it a sudorific ptisan, and when the patients exhibit symptoms of debility, he adds to the ptisan sulphate of quinine.

"The ptisan of Feltz is also employed, and, according to M. Cullerier, with a success truly surprising. He administers this remedy when secondary venereal symptoms, such as exostosis, deep-seated pains, periostosis, cutaneous eruptions, ulceration of the soft parts, and caries of the bones or cartilages of the nose and mouth, after having several times yielded to the treatment by the sublimate and frictions, again reappear. This remedy then almost constantly succeeds, even after the disease has a long time existed, at least when the malady has not produced too profound alterations of the tissues.

"The hydro-chlorates of gold and platina, have not justified in the hands of M. C. the pompous annunciations of their promulgators, and their use has been abandoned. He considers baths containing a solution of the sublimate, an energetic mean of cure, but as this mode of administration requires much precaution, it is but rarely used in the hospital. The local applications are few and simple. They consist of simple or mercurial ointment to the ulcerations, but most commonly of lint moistened with a decoction simply emollient or narcotic, and of appropriate applications, as the sores may be fungous, irritable or indolent. As to fleshy granulations, (végétations,) excision is not resorted to, except when the specific treatment is finished, or nearly so. This operation is then generally successful, but in some cases these vegetations seem to pullulate with increased activity. When this is the case they are cauterized with nitrate of silver, hydro-chlorate of antimony, or nitrate of mercury. But these vegetations will sometimes still resist the activity of these applications.

"Fissures of the anus are also attacked with caustic. The actual cautery has succeeded best in the practice of M. Cullerier. Those which sometimes appear on the hands and feet, demand perfect cleanliness and repose, and are constantly cured with the liquor and frictions, and a local dressing with simple or mercurial ointment. Venereal pustules do not require any peculiar treatment. In exostosis, periostosis, &c. local bleeding has never been of much utility.

"In regard to the nature and importance of gonorrhœa, there still exists a difference of opinion. M. Cullerier believes his long experience has demonstrated that this affection is often followed by a general infection, so that he thinks this symptom ought to be combated with means appropriated to the treatment of constitutional syphilis."

There is one other establishment in Paris for the treatment of this class of diseases, called the "*Maison de Santé.*" This *house of health*, adjoining the Venereal Hospital, was opened in 1809. It is divided into small apartments, and patients of both sexes are admitted at a stated price per day, including all expenses. They are treated with much attention. In 1813, the number of patients was 269; in 1822, it was 310.

We have introduced the notice of the above institution here, more particularly for the purpose of speaking of the practice of one of the

surgeons connected with it; the celebrated and venerable DUBOIS, the compeer and associate of Baron BOYER. His practice and principles are thus briefly summed up by M. RATIER:—

"Although more particularly devoted to surgery, this distinguished practitioner is much occupied with internal affections, for which a great number of patients claim his attention. It is well known that M. Dubois holds on many points of practice, opinions which are peculiar to himself, and which he has adopted as the fruits of a long experience. He regards the tonic treatment most efficacious in scrofulous and scorbutic affections. He considers mercurial frictions *pushed to salivation*, as the mean most certain for the cure of obstinate and inveterate syphilitic maladies, while with the greater part of physicians, salivation is considered an unfavourable consequence of the mercurial treatment, and one which they carefully guard against. His opinions in general, approach those of BROWN, and he makes frequent use of tonics, stimulants, and revulsives. Venesection he practices with an extreme reserve, even in those cases where the greatest number of physicians insist most on its employment. He rarely prescribes general bleeding in acute phlegmasias—membranous or parenchymatous—limiting himself for the most part to a few leeches, following their application with blisters."

Before closing this article, it may not be uninteresting to present a short abstract of the anti-syphilitic treatment of Baron DUPUYTREN:—

"Syphilis complicates many surgical diseases, and itself produces a considerable number. Hence arises the necessity of uniting an anti-syphilitic treatment with other surgical remedies in these complicated affections. It is in vain in these cases that we treat separately the principal malady and the venereal complication. It is almost always necessary in order to cure them, that they should be simultaneously treated. The choice of curative means is here of the utmost importance. Metallic mercury reduced to a state of oxide by trituration with lard and applied by friction, cannot besides other inconveniences, be used without much difficulty in the general hospitals, and the large halls ordinarily deprived of a temperature which disposes the skin to absorption. Corrosive sublimate, administered by the mouth in a diluted or concentrated solution, has also its inconveniences: in a concentrated solution, it acts too powerfully on the stomach, while it irritates and inflames the lungs; in a weak solution with the daily tisan, it is almost always decomposed, precipitated, and thus deprived of its efficacy; while its administration necessarily abandoned to the will and sagacity of the patient, is frequently very irregular.

"The venereal affection, when it complicates surgical diseases, is generally ancient, inveterate, and as it is called *constitutional*, being most frequently characterised by eruptions, night pains, &c. These considerations have directed M. Dupuytren in the choice of the means which he employs against these complicated affections. His treatment is made up of sudorifics, mercurials and anodynes, somewhat after the following formula.

"Take every day, for a common drink, a tisan composed of *Radix chinæ*,*

* A chinese plant resembling sarsaparilla.

sarsaparilla, and guaiacum, a half ounce each, boiled in a quart of water till the mixture is reduced one-third. Add to the first glass of this at morning, and to the last at night, a sudorific syrup.

"Take morning, noon, and night, one hour before eating, a pill composed of Ex. Guaiaci, two grains; watery extract of opium, half a grain, and corrosive sublimate, one-sixth of a grain.

"He does not ordinarily make use of any local treatment, so that the local symptoms become in some manner an index to the operation of the internal remedies, and they disappear almost constantly after these last have been used a certain length of time, to wit—the pains at the end of eight or ten days; the venereal character of wounds and ulcers at the end of a few weeks; indurations, excrescences, and the ulcers themselves, in a month or six weeks, and at last the exostoses.

"It has been too generally the case, that venereal affections have been considered radically cured, as soon as the symptoms have disappeared. M. Dupuytren is persuaded, that in the greatest number of cases the disease is then only palliated, and all the symytoms will very often spontaneously return. He has adopted, as a general rule, in the treatment of constitutional syphilitic maladies, to continue the employment of the curative means after the entire disappearance of all the symptoms, during a time equal to that which was taken up by the treatment before the disappearance of the symptoms."

Lowell, Mass. September 15th, 1829.

REVIEWS.

ART. XVII. *The Influence of Climate in the Prevention and Cure of Chronic Diseases, more particularly of the Chest and Digestive Organs: comprising an account of the principal places resorted to by Invalids in England and the South of Europe; a comparative estimate of their respective merits in particular diseases; and general directions for Invalids while travelling and residing abroad. With an Appendix, containing a Series of Tables on Climate.* By JAMES CLARK, M. D. Member of the Royal College of Physicians of London; Corresponding Member of the Royal Medical Society of Marseilles, of the Medico-chirurgical Society of Naples, of the Medical and Physical Society of Florence, of the Academy of Sciences of Sienna, &c. &c.

A KNOWLEDGE of the physical effects of heat and cold on the human constitution, is of the utmost importance to the advancement of medical science and to the attainment of certainty in the alleviation and cure of diseases. But, unfortunately, our acquaintance with this branch of study has made but slender advances. It is true, there are many detached essays which are extremely valuable and throw considerable light on this intricate subject, but medical literature is as yet deficient in a work, which, whilst it treats of climate and other atmospherical phenomena in a philosophical point of view, at the same time demonstrates in a clear and perspicuous manner, the influences exercised by such agents on the human economy in a state of health and disease. Such a work can only be produced after a long and diligent course of enquiries, and in all probability will be rather the result of the investigations of numbers, than the fruits of individual experience.

One of the first writers on the subject of climate as connected with disease, was HIPPOCRATES in his treatise "De aere, aquis et locis." This work is remarkable for the profound and philosophical views it displays, and when we consider, what slender advances, had been made towards a physical knowledge of nature in the author's time, and that the facts and observations detailed in it, must have been the result of his own diligent and sagacious attention, it appears wonderful that his deductions should have been so accurate. But we are not to expect from him, too much, for although he travelled extensively in Asia and

Greece, yet his observations on the winds, &c. are of a local character, and are only applicable to those situations in which he observed them. It should always be borne in mind, in consulting writers on atmospheric influences, that the difference of climate and other concommitant circumstances, between the situation described and that of the reader, must be taken into consideration; this has been too often overlooked, and has given rise to much confusion and mischief.

Of late years, the labours of Lancisi, Pringle, Cleghorn, Lind, Blane, Johnson, and others have contributed much to elucidate the effects of particular climates, but they are far from rendering our knowledge complete. Dr. Gregory's work on the "Influence of a Change of Climate in the Cure of Diseases," and "Foster's Illustrations of the Atmospherical origin of Epidemic Disorders of Health," have also added to our information on these topics.

The author of the work now before us, is advantageously known from a former publication, on the same subject, abounding in important facts, detailed in a clear and practical manner. He possesses a sound judgment, great zeal, and has enjoyed unusual opportunities for investigation.

In the present publication his object is to elucidate the physical characters of certain climates, with his experience of their effects and the medicinal or remedial qualities of each particular climate, as deducible from the combined results of the two preceding sources of information. Much of it is necessarily of a local character, and of course not of sufficient interest to American readers, to render an analysis requisite; we shall therefore confine our extracts and observations to those parts, which have a general and universal applicability.

General influence of climate.—After remarking on the advantages which accrue from a partial change of residence, in the mitigation and cure of many diseases, where they had long resisted medical treatment, our author observes that—

"If such marked results are produced by a change of so limited an extent, it is surely reasonable to expect that a complete change of climate, together with the circumstances necessarily connected with this, should produce still more important results, and in this expectation we are borne out by experience."

The great fault has been in resorting to this expedient at too late a period, using it in fact as a forlorn hope, only to be employed when the case has become so desperate and uncontrollable as to baffle the best directed treatment; hence it is scarcely to be wondered at, that success so seldom attends the practice of sending invalids from home; and the failure ought not to be attributed to the

want of power in the remedy, but rather to the period at which it has been prescribed.

In large and populous towns, the state of artificial society acts in an imperceptible, but finally marked manner on the health of their inhabitants, though the diseases induced may be infinitely varied by the habits and occupations of the individuals.

"In that numerous class of persons, indeed who are merely suffering from a residence in the city, without any decided disease, the simple change to the country may be all that is requisite to restore their health."

It is this class to whom excursions to our different watering places is of such decided benefit, and it appears immaterial to which they resort, whether to inhale the sea breezes at Long Branch and Cape May, or to enjoy mountain air and exercise at some of our inland places of amusement: they gain a renovated stock of health at any, the mere change from the vitiated and close atmosphere of our cities to the pure and invigorating atmosphere of the country, with the necessarily attendant exercise, being all they require.

"But the case is very different with the real invalid, whose sufferings are chiefly referable to some particular disease. To him, the selection of his temporary residence is not a matter of indifference. For one individual of this kind, an elevated situation and a dry bracing air, will be the most proper; a sheltered residence, with a milder air, will be suitable to another; while the sea-side may be the situation indicated for a third."

This has unfortunately been but little attended to, and a trip to the springs or the shore, is recommended indiscriminately for all classes of disease, without sufficient reference being had to their nature and symptoms. But the great difference that exists in the physical characters of the various watering places in the United States, renders a selection of that best suited to the disease under which our patient may be labouring, a matter of paramount importance.

The mere act of travelling, is often a remedy of great value, and we are much inclined to believe that in a majority of cases, the beneficial effects attributed to the specific virtues of the different medicinal springs is mainly owing to this cause. From the continued change of air and scene, both the body and mind become invigorated, and the sufferer is oftentimes astonished to find that a manifest alleviation of his disease has occurred even before he reaches the place of his destination.

"But neither travelling, nor change of climate, nor the combined influence of both will produce much permanent benefit unless directed with due regard to the nature of the case, and aided by a proper regimen. The air or climate, is often regarded by patients as possessing some specific power, by virtue of

which it directly cures the disease. Let it not be imagined that change of climate, however powerful as a remedy, can be considered in its mode of action as totally different from other remedies or as justifying, either on the part of the physician or patient, the neglect of those precautions which are requisite to ensure the proper action of all our therapeutical means."

Dr. Clark examines the climate of different parts of Europe in detail, commencing with that of England. From his observations, and the concurrent testimony of other writers, it is apparent that places situated but a few miles from each other, but differing in their exposure, present visible and strongly marked variations in their temperature, and more particularly in their effects on invalids, however close their resemblance to each other may be in general characteristics. From such data, our author has made a kind of grouping or natural classification. Thus, he divides the mild region of England into four districts; that of the south coast, the south-west coast, district of the land's end, and the western coast comprehending the places situated on the Bristol channel, each of these regions having peculiar characteristics in its climate, which distinguish it in a medical point of view. There is little difference between these places as to their annual mean temperature, but there is considerable variation as regards the distribution of heat. This is a most important particular in our estimation of climate, when considered medically, for although the mean temperature of a country, as for instance in our own state, may indicate mild and temperate climate, there may be such rapid and great transitions from heat to cold, as to unfit it for the residence of patients affected with certain diseases.

The south of France has long been considered as affording peculiar advantages to invalids, on account of its mild climate; and thousands have resorted to it in the oftentimes vain hope of restoration to health, but it is evident not only from Dr. Clark's statements, but also from the testimony of several recent writers, that these expected benefits have been much overrated.

"The climate of the southern provinces of France, admits of being classed under two divisions, namely, the south-eastern and south-western. These two regions differ essentially from each other in the physical characters of their climate."

The climate of the south-western coast, appears to be very mild in the winter and temperate during the summer; it is soft, relaxing, and rather wet, and well suited to gastritic dyspepsia and the dry bronchial irritations, as well as all chronic inflammations of the mucous membranes accompanied with little secretion.

The south-east of France, however, has been the great resort of invalids, especially those afflicted with consumption, but experience has most amply shown, that few places are worse calculated to produce beneficial consequences. Dr. Clark demonstrates this in the clearest manner, not only by a reference to the physical characters of the climate, but also, by the actual prevalence of consumption among the inhabitants, and especially, from the total want of success attendant on the measure.

The general character of the climate of the south-east of France is dry, hot, harsh and irritating. Its temperature is distributed through the year, and through the day with great irregularity. This tract of country is subject also to keen, cold northerly winds, especially the *mistral*, which prevails during the winter and spring, and is most injurious to pulmonary diseases.

Italy.—This country, from its diversified surface and stretching through so many degrees of latitude, necessarily possesses a great variety of climates. Dr. Clark has confined his observations to that part of it situated between the Appenines and the Mediterranean; this tract of country, he observes, exhibits a great similarity of character, the principal circumstances which modify it, being the relative position of places, with respect to the sea or the mountains. Italy, with but few exceptions, does not appear to be well suited as a residence for consumptive patients, particularly in the summer season. The climate of Rome, as regards its physical qualities, is altogether the best in Italy, and is remarkable for its calmness and stillness; hence, it is valuable as a winter residence for persons labouring under pulmonary diseases; this place is however subject to occasional storms of wind called *tramontane*, resembling the mistral of Provence, during the winter months.

As a summer residence, Rome is peculiarly unfitted for invalids, from the prevalence of that scourge of Italy, the malaria. Dr. Clark's observations on this subject are extremely interesting, as containing the result of several years personal experience. He is of opinion, that the fevers caused by the malaria are similar to all fevers arising from marsh miasmata, and that the whole of this class of diseases only differ from each other, from some peculiar circumstances in the nature of the climate, or the season in which they occur. Of this, there can be little doubt, for although in some situations they assume a very formidable character, it is easily demonstrable, that the fevers of the southern section of our country, the jungle fevers of India, and those of the fens of Lincolnshire, all belong to the same class, as the malaria fevers of Italy. These complaints seldom appear in Rome

before July, and cease about October; the exciting causes are exposure to currents of cold air after the body has been heated; long continuance under the direct influence of the sun's rays, and improper diet. Respecting the last of these causes, Dr. Clark makes the following just and pertinent remark:

"If there be any one circumstance in the state of the constitution, which more than another enables it to resist disease, and to pass through disease safely when it does make its attack, it is, according to my observation, a healthy condition of the digestive organs. In every situation of life, and in every climate, this holds true."

Our author is of opinion, that the common idea of the rapid increase of the influence of the malaria around Rome, is erroneous. From a comparison of the admissions into the Hospital of S. Spirito, (the largest in Rome,) for twenty-five years, he found that there was no great difference in the number attended, except in certain years which were remarkable for their unhealthiness.

Dr. Clark also notices a peculiarity of the inhabitants of Rome, which has been observed by every traveller, the peculiar sensibility of their nervous system. Even a temporary residence of some duration at this place, produces a degree of the same morbid state, apparently depending in a great measure on the climate.

We pass over what our author says respecting Switzerland, to notice his remarks on Madeira. This island has long been noted for the mildness and equability of its climate, and on a comparison of its temperature with other countries, it appears that this character is well founded, particularly as regards its equability. The mildness of the climate is also accompanied with a corresponding degree of health in the inhabitants, as the island is almost exempt from the diseases peculiar to warm climates, and little subject to many of those common in the northern. Consumption, however, it is asserted, is extremely prevalent; this is denied by some late writers, particularly by Dr. Heineken. (Med. Repos. vol. xxii.)

The folly of sending patients in an advanced stage of consumption, to a milder climate, in the hope of cure, can only be productive of mischief and disappointment. When the character of this disease is fully developed, it unfortunately bids utter defiance to all plans of treatment and all changes of situation; when it has proceeded to any extent, it is the bounden duty of the physician to dissuade a patient from attempting a removal from among his friends, in the vain hope of a restoration to health. In foreign countries, experience has amply shown, that instead of a cure, all that is found is an early grave. Dr. Clark gives the result of cases sent to Madeira, taken from records

kept by Dr. Renton for eight years, fully corroborating what we have said. Of forty-seven cases of confirmed phthisis, thirty-two died within six months after their arrival in Madeira; six went home, returned and died; six left the island, whose death has been ascertained, leaving but three, who also it is probable died. With regard to incipient phthisis, however, a removal to a mild and equable climate has certainly proved advantageous, and should be resorted to, with as little delay as possible. Dr. Clark speaks in the highest terms of Madeira, as affording greater prospects of cure, or at least alleviation of the disease, than any other place. Judging, however, from the concurrent testimony of various writers, we should be tempted to think that he has overrated its advantages; for, even granting its superiority in equability and mildness of temperature, still it is necessarily exposed to that bane of consumption, a mixture of land and sea air. Dr. Huntt, of Washington, has collected together a mass of testimony on this point, which most amply demonstrates, that situations exposed to the action of sea air should be carefully avoided.* It is certain that all our towns on the sea-board are infinitely more afflicted with this disease, than those situated more inland. A comparison of the bills of mortality of Boston, New York, and Philadelphia, will at once convince any one of this fact. In the United States there is no necessity for sending our consumptive patients abroad to obtain the advantages of a mild climate, our southern states affording every advantage of temperature that can be obtained elsewhere, particularly in the pine forests in the interior of Carolina and Georgia, and the interior of Florida.

The second part of Dr. Clark's work is infinitely more interesting to us than that we have examined in so cursory a manner, being devoted to the consideration of the principal diseases which are benefitted by a mild climate. As is observed by our author:

"Too much is generally expected from the simple change of climate. From the moment the invalid has decided on making such a change, his hopes are too often solely fixed upon it, while other circumstances equally important to his recovery, are considered of secondary value, or sometimes wholly neglected. Nor is the fault always confined to the patient; his medical adviser frequently falls into the same error, and it is not difficult to account for this. The cases hitherto sent abroad have been, for the most part, consumptive or chronic diseases, of long standing, in which the ordinary resources of our art have usually been exerted in vain, before such a measure is recommended. Therefore, when a change of climate is determined upon, the physician, as well as

* North American Med. and Surg. Journal, vol. i. p. 284.

the patient, is disposed to look upon it as the sole remedy. The former generally advises all medicines to be laid aside, except such as are requisite to keep the bowels open, and with this counsel he consigns the patient to his fate!"

But this is not all; extraordinary as it might appear, it is but too common for the invalids themselves, when thus sent abroad, to apparently forget the very object for which they left their country, and to conduct themselves as if they were in the most robust health.

After giving some rules for the conduct of invalids whilst travelling in Europe, Dr. Clark treats of the particular classes of disease, in which a removal to another climate is beneficial.

Disorders of the Digestive Organs.—From the prevalence in this country, particularly in our large towns, of diseases of the stomach and bowels, and the contradictory advice and practice of physicians in them, especially in that most proteiform of all complaints, dyspepsia, we are glad to see any attempt to throw additional light on the subject. That much of our want of success arises from our "overlooking the real nature of the disease, and directing our efforts rather to palliate symptoms, than to remove the pathological condition on which these depend," there is but little doubt. But there is another reason, which operates far more extensively, and depending on the patients themselves—their vain endeavour to reconcile the indulgences of the table, with a restoration to health. Every practitioner, even of the most limited experience, must have discovered, that it is infinitely more practicable to induce patients to submit to a course of the most nauseating medicines, than to a rigidly regulated diet.

Our author is of opinion, that numerous as are the causes of dyspeptic complaints, they may be arranged under two great classes; those which exercise their influence on the general system, and those which act more immediately and primarily on the stomach. In the first of these classes he places all causes which debilitate the body and augment the nervous irritability; as, mental anxiety, the depressing passions, over exertion of mind, sedentary life, &c. These, however, are not as frequent or permanent in their action, as those which act in a direct manner; as errors in diet, the abuse of stimulating and purgative medicines, &c. The morbid conditions induced by these agents are also of two different kinds, either an irritated state of the mucous surface of the stomach of an inflammatory character, or a highly increased degree of sensibility of the nerves of the same part, accompanied, in most cases, with a loss of tone of the whole viscus. The former of these he terms gastritic dyspepsia, and the latter nervous. The symptoms which characterise these two forms, are often distinctly marked. In the gastric or inflammatory species, the

pulse is very generally contracted and often quickened, especially after meals, and towards night. In the nervous kind, the pulse is seldom altered, but it is more constantly connected with head-ache, of a severe form. This head-ache is generally preceded by a sense of coldness and creeping on the surface, particularly in the extremities, in some cases amounting to shivering; there may also be nausea and vomiting; the pain is more intense on one side of the head than the other, and is usually most severe at the temples, though the upper and back part of the head are also often affected; the latter part is especially so, when uterine irritation is superadded The head-ache of gastritic dyspepsia is also acute, but is combined with a feeling of distention, and is usually situated in the forehead and temples. This pain comes on in most cases in the evening, or during digestion, whilst the nervous attack generally occurs in the morning, and when the stomach is empty.

"Nausea and vomiting are more common in the gastritic, flatulence, vertigo, tinnitus aurium, deafness, dimness, and other affections of vision, in the nervous dyspepsia."

Dr. Clark's description of the state of the tongue and other symptoms in these two species of dyspepsia, is well drawn up, and merits close attention. Did our limits permit, we would willingly insert his account entire, but must content ourselves with a very brief and condensed sketch of his remarks. In gastritic dyspepsia, the tongue is redder than natural, especially at the extremity and on the edges; these parts are usually studded with small points of a still brighter colour. It is found towards the base, with large red papillæ projecting through the coating. When the stomach has been disordered for a long time, the tongue assumes a sodden appearance, and appears lobulated, from numerous fissures running over its surface; in this case it is clean or but partially furred, the uncoated portions having a glossy aspect. This state occurs most frequently in those who have lived full, and been in the habit of using drastic purgatives. In nervous dyspepsia, the tongue is generally pale or covered with a thin white fur, but rarely dry. In gastritic dyspepsia there is more tenderness of the epigastrium, and more thirst than in the nervous form. In the latter, the bowels are costive, and the urine is pale, whilst in the former, the urine is high-coloured.

Independently of particular symptoms, there are some general characteristics appertaining to each of these species.

"The symptoms which accompany gastritic dyspepsia, are more fixed and permanent; they may be present in a greater or less degree, according to circumstances, but they are never absent. In nervous dyspepsia, on the contrary,

the symptoms vary in a remarkable degree. The patient feels, at times, almost entirely free from them, and the functions of the digestive organs are performed with scarcely any indication of derangement, or all the symptoms are often greatly augmented, the patient being unable to assign any particular cause, either for their disappearance in the one case, or their increase in the other."

But the most common form in which we find this perplexing disease, is where the two species are either united, or alternate with each other, rendering a cure much more difficult to procure. The nervous dyspepsia, if long continued, most generally terminates in the gastritic; but this latter seldom changes permanently into the former. Dyspepsia may also be complicated with a deranged state of the chylopoietic viscera, thus still more obscuring the case, and embarrassing our choice of a curative plan—where it is simple, and especially in the early stages, when the stomach only is implicated, the cure is not difficult, provided the exciting causes are carefully guarded against. But in protracted cases, we have all felt how completely and wholly we have been baffled in our endeavours to afford relief, from a want of resolution and perseverance on the part of the patient.

The most common of the complications of dyspepsia, is that with affections of the liver. On this Dr. C. makes the following just and forcible remarks, which we quote entire, from the conviction that his observations are but too true.

"But although a congested state of the vessels, (of the liver,) and a deranged condition of the secreting functions of this viscus are very constant attendants on dyspepsia of some duration, the liver is much more rarely diseased than is generally believed. The common expressions of the liver being 'affected,' 'touched,' &c., so generally employed in cases of dyspepsia, are to be regarded as words without any definite meaning being attached to them; and are too often, I fear, employed to conceal our ignorance of the nature of the disease. On this account, these indefinite expressions deserve condemnation, but I notice them here chiefly to deprecate the mischievous practice to which they too often lead. I allude to the indiscriminate use of mercury, in the form of calomel, or blue pill, and of irritating purgatives. This is a mode of treatment, which, notwithstanding its very general employment, I think I may venture to say, never yet cured a single case of dyspepsia; and I am satisfied that in this disease, it has been, and continues to be, productive of incalculable mischief. Indeed, I may safely affirm, that among the numerous cases of decayed constitutions, which I met with among dyspeptic invalids, the larger proportion had suffered more from calomel and drastic purgatives, than they would have done from the disease if left to itself."

We are too apt in this country to recur to calomel and the other mercurial preparations with an unsparing hand, regardless of the consequences resulting from their employment. Some of our practitioners talk of two scruple and drachm doses, given three or four times

a day, as the only means of subduing bilious fevers, and seem to think that a severe salivation is a mere trifle.

A diseased state of the stomach, when it is of long standing, is also productive, or is the exciting cause of disorders of other systems; thus it may induce gout, rheumatism, deranged conditions of the circulatory organs, and especially of the brain. "Many of these symptomatic disorders simulate idiopathic affections of the same kind so perfectly, as to be often erroneously treated as such."

It would be interesting to enquire what secondary affections originate in each of the different diseased states of the stomach, and we know of no subject of investigation which opens a wider and more useful field, or would be productive of more advantageous results. It is however certain, that as the secondary disease becomes established, the primary affection is oftentimes mitigated and suspended. From these complications of dyspepsia, a state of the constitution ensues, in which the remedial indications seem almost to contradict each other. Thus, for instance, we may have an irritation of the mucous membranes, a congested state of the blood-vessels of the intestines, with a diminished circulation through the surface and extremities, and a morbidly sensitive state of the whole nervous system, with depression of spirits and great irritability of mind. There is irritation which requires soothing, an irregular distribution of the circulating fluids and of the nervous influence, which needs regulation, a diminished or disordered state of the secretions, which must be rectified, and this connected with a broken and shattered constitution.

Dr. Clark is of opinion that one of the best remedial measures in dyspepsia, whether in a simple or combined form, is a change of climate. But in adopting this plan, the peculiar character of the disease is to be strictly attended to, and to insure the full advantages expected from travel, or from a residence in the best chosen climate, urgent symptoms should be removed or alleviated, before the patient commences his journey; and he should, above all, have the nature of his disorder, and the principles upon which he should regulate himself, during his journey and absence abroad, fully explained to him. The want of a proper attention to these matters, is one great reason, why invalids affected with dyspepsia, are in so many cases, rather injured than benefited by travelling.

Dr. Clark's directions as to diet are very judicious, and are well suited to a majority of cases, though from the capriciousness of our digestive organs, it is oftentimes difficult, *a priori*, to determine what will agree with the stomach and what may prove pernicious. But, notwithstanding this peculiarity of constitution, it has been found

that certain articles of food invariably aggravate the disease, and should be rigorously abstained from.

"It should also be borne in mind, that on removing to a warmer climate, the sensibility of the system is increased, and it is, consequently, more easily excited by stimulants of every description. This remark is more particularly applicable to persons suffering from stomach complaints."

Wine should always be used with great moderation, and then of the lighter kinds, as claret and sauterne. No dessert should ever be allowed. Exercise should be habitually made use of, but not to such a degree as to produce much fatigue. Medicines should never be taken, except under the direction of a physician. Dr. C. says that ice and cold water, sipped slowly, are very beneficial in gastritic dyspepsia, provided there is not much disposition to head-ache or pain in the stomach. Fluids ought to be taken slowly and in small quantities by dyspeptic persons, and they should always be directed to masticate their food deliberately and perfectly; in fact, imperfect mastication is one of the most common sources of the disease.

Our author sums up his enquiries as follows:—

"1st. Dyspeptic complaints are chiefly referable to, and have their origin in, two leading pathological conditions of the stomach—the one of an inflammatory, the other of a nervous character.

"2d. These two states require two different modes of treatment, and are benefited by climates of a different character; a soft and mild climate being more suitable to the inflammatory form, whilst a drier and more exciting one is most beneficial in the nervous and congestive form.

"3d. In complicated cases of dyspepsia, which are the most frequent, the method of treatment, both generally and as regards climate, must be regulated chiefly by the morbid condition which is the more predominant, and which influences the constitution most evidently. When a secondary series of disorders has been induced, these, as well as the hereditary disposition of the patient must also be taken into consideration in selecting a fit climate.

"4th. Mineral waters are very valuable remedies in chronic disorders of the digestive organs, and will frequently effect cures after climate and suitable regimen have failed to do more than relieve.

"5th. The advantages to be derived from change of air, climate, mineral waters, &c. depend in a great degree, upon the proper application of those agents to the nature and degree of the disorder, and upon the regimen to be followed by the patient during their operation.

"Finally. No change of climate, or other remedy, can be made permanently beneficial, while the exciting causes of the disease, continue to be applied.

Altogether, the account given by Dr. C. of dyspepsia, and of the advantages to be derived from change of air and climate, is the best we have met with, and is calculated to be of great service in our treatment of this refractory complaint.

The next subject of discussion is that of consumption, a disease in which change of climate is considered to be more important and productive of better results, than in any other. It cannot, however, be denied, that there is no one in which the hopes founded in such a change, are more constantly disappointed. It is true, we have some few examples where beneficial effects have arisen from this plan of treatment, but they bear but a very slight proportion to those in which it has totally failed.

Pulmonary consumption may be considered as an endemial disease of our country, or more properly speaking of the northern and middle portions of it. It is one of the great outlets of life, along the whole sea-coast, from Maine to Carolina. Dr. Spalding, in his bills of mortality drawn up at Portsmouth, in New Hampshire, has fully proved that this disease is equally destructive, in a given time, in the New England states, with the highly inflammatory fevers of Georgia and Carolina.

In Philadelphia, the proportion of deaths by consumption to the whole number of deaths is 1 in 6; the deaths being to the population, as 1 in 48; hence 1 person in about every 300 is carried off by this disease each year. The highest number of deaths by consumption in one year, is 587, reported in 1826; the lowest number 216, in 1813. The whole mortality by consumption in twenty years, is 7977. If to this we should add the deaths from acute diseases of the lungs, it would amount to the grand total of 10,281 deaths in twenty years from disorders of the lungs. The greatest mortality occurred between the thirtieth and fortieth years of age.*

In New York and Boston, the proportion of deaths by this disease are much greater, and in London, it appears that the proportion is 1 in every 4 deaths.

The belief in the efficacy of change of air and climate in consumption, is of very ancient origin, and is general over the whole civilized world, and cases of failure are more commonly attributed to its being resorted to too late, than to any want of efficacy in the measure itself. Dr. Clark, however, is of opinion, that this mode of cure is, by far too much overrated; in this he is supported by Dr. Rush, who observes, "I do not recollect an instance of its having succeeded, except where it has been accompanied by exercise, as in travelling, or by some active laborious pursuit." But it would be impossible to attempt even to glance at the various opinions and rea-

* Medical Statistics of Philadelphia. By G. Emerson, M. D. American Journal of the Medical Sciences, Vol. I. p. 116.

sonings of eminent authorities on this subject; we shall therefore confine ourselves to the remarks of our author.

"Respecting the treatment of consumption, we must admit the humiliating truth, that there is no reason to believe, that physicians of the present day are more successful than their predecessors were ten, nay twenty centuries ago."

Notwithstanding the general truth of this observation, as regards the cure of consumption, there is at the same time no doubt but that much has been done in elucidation of its pathology within the last few years. It is now clearly ascertained, that the immediate and essential character of consumption is the existence of tubercles. But we still know but little, as to what state of the system leads to the formation of these bodies; and until we can attain this knowledge, no sound or fixed rules can be established for the *prevention* of consumption.

"I say prevention of consumption, because to cure it, even in its earlier stages, or in other words, to remove tubercles already existing in the lungs, is what we can scarcely hope to do."

As regards the proximate cause of tubercles, Dr. Clark thinks, that they are not generally the result of inflammation. We present his views without comment, though we cannot entirely yield our assent to their correctness. He asserts—

"That in a healthy subject, tubercles are never the result of inflammation. When, therefore, these appear to be the product of inflammation, it will be found to be inflammation occurring in, and modified by a disordered state of the system of a peculiar kind. To this disordered state of the system, it behoves the physician to direct his chief attention. It is only by correcting it he can prevent the formation of tubercles, or in other words, prevent consumption."

"But although I do not consider inflammation as the cause of tubercles, I agree with most pathologists in believing that it accelerates their progress."

There can be no doubt but that the occurrence of inflammation renders the disease more complicated in its symptoms, much more refractory in its treatment, and more rapidly fatal in its termination. In persons who are predisposed to tubercular disease, the occurrence of catarrhs and inflammations of the lungs, may keep up such a degree of irritation of the lungs, as to induce the formation of tubercles at an earlier period than would otherwise have taken place.

"But the real cause of tubercles, I believe, with Dr. Todd and some other pathologists, to be a morbid condition of the general system, hereditary in some, but induced in others, and increased in all cases, by a series of functional derangements ultimately affecting the whole animal economy. This state of the system may be denominated tubercular cachexy."

We are unable at this time to follow Dr. C. in his account of the leading symptoms characterizing this state of the system, but as he himself observes, it is more easily recognised than described.

Under the general term of consumption, observes our author, we may comprehend three different forms or stages of disease; 1st, general disorder of the health; 2d, tubercular cachexy; and 3d, consumption, properly so called. In persons with a strong hereditary taint, the first stage is obscure and not easily observable, whilst in those cases where the predisposition is acquired, the degree of constitutional disorder which precedes and accompanies consumption is far more apparent. Cases sometimes occur, especially in young delicate females, in whom tubercular disease advances so imperceptibly that the patient is on the very brink of the grave before the friends are aware of the existence of danger. Dr. Clark combats the common idea, that in consumptive patients there is generally great serenity of mind, with buoyant spirits and a strong hope of recovery; this he says occurs in the purer and less complicated cases of hereditary consumption, but is by no means a common attendant on the other forms, and more especially where there is much disorder of the digestive organs.

Among the causes of the constitutional disorder which precedes, and induces consumption, hereditary predisposition certainly holds the first rank. By this term hereditary predisposition, Dr. Clark means

"A peculiar condition of the system, depending upon its original conformation and organization, and derived from the parents, which renders the individual more susceptible of, or more liable to lapse into certain diseases, than other persons endowed originally with a more healthy organization. It does not follow, however, as a necessary consequence, that a child who is born with a predisposition to a disease must be attacked with that disease."

There is also another mode in which a predisposition to consumption may be transmitted by parents to their offspring, this is the deteriorating influence of other diseases, as gout, dyspepsia, &c. But consumption is also induced, and perhaps in a majority of instances, by the operation of external or incidental causes, so that no person, however healthful his original organization may have been, is totally exempt from the liability to this disease.

Generally speaking, all causes which lower the tone of the bodily health, predispose to consumption. Of this kind are sedentary occupations, unwholesome or improper diet, long-continued functional disorders of most of the organs, and especially of the digestive. The influence of the depressing passions is also a common predisposing

cause, some writers, as Morton and Laennec, considering them as the most frequent of any. These causes may act at any time during life, but our author thinks that the origin of the constitutional disorder we have been speaking of, is in many cases to be traced to the mismanagement of children, for the seeds of disease, which will ripen at a later period of life, are but too frequently sown during infancy and childhood. We have not space to follow Dr. Clark in his able view of the various causes which tend to propagate or heighten a predisposition to consumption; the following remark, is, however, too valuable to be passed over without notice.

"It matters little, as to the result, in what organ the mischief begins. The first inroads upon the heath, however, are generally made through the organs occupied or immediately connected with the supply and waste of the system—those organs which perform the important function of digestion and assimilation, and those whose more obvious office is to remove the effete and waste matter from the system. Thus the digestive organs and the skin generally exhibit the earliest symptoms of disorder; and in these, in a very large proportion of cases, may be observed the first links of the chain of morbid actions which undermine the general health and ultimately end in tubercular cachexy."

It is during this forming stage of consumption that a change of climate will prove beneficial, but unfortunately it too often happens that the period of functional disease, already alluded to, is permitted to pass before either the patient or his friends are aware of the extent of the danger. Thus, for instance, but little is apprehended until symptoms of irritation or impeded action in the lungs appear, such as cough, shortness of breathing, pain or a sense of stricture on inspiration, or spitting of blood; but alas, these symptoms are sure indications that tubercular disease is already established. When tubercles are formed, the circumstances of the patient are materially changed, but even now removal to a warm climate may still be attended with beneficial consequences, as contributing to improve the general health, and to prevent inflammatory affections of the lungs and bronchia. But where the disease is fully established, Dr. Clark is most decidedly opposed to sending patients abroad.

"Under such circumstances," says he, "the patient and his advisers will therefore act more judiciously by contenting themselves with the most favourable residence which their own country affords, or even by awaiting the result amid the comforts of home, and the watchful care of friends." "There are, however, chronic cases of consumption, in which the disease of the lungs, even though arrived at its last stage, may derive benefit by a removal to a mild climate."

This is when the disease is induced in those who are little disposed to it constitutionally, and in whom it usually occurs later in life than

when hereditary, or in those rare cases where the progress of the disease in the lungs has been arrested by nature, but in which a long period must elapse before the work of reparation is completed.

When removal to a milder climate is decided on, it becomes a question of no slight importance as to which is the best. Dr. Clark thinks that which is best suited to consumptive patients generally, is the island of Madeira; one great advantage this place possesses over most others, is that the patient may reside there during the whole year.

There is yet another measure in the treatment of consumption, which requires some notice, it having been recommended as a substitute for change of climate, this is keeping patients in rooms artificially heated and maintained at a regulated temperature. Of this plan Dr. C. does not approve, more especially in the incipient stages, though he thinks that in the advanced stages, and where a removal would be useless, such a measure may prolong life.

With respect to the time a consumptive patient is to remain in a mild climate, in order to obtain permanent advantages, it must be obvious that no general rule can be given, it must depend wholly on the benefit received, and the degree of the derangement of the respiratory organs.

Dr. Clark sums up his observations on consumption, with the following corollaries:—

"1st. That tubercles in the lungs constitute the essential character and immediate cause of consumption.

"2d. That tubercles originate in a morbid condition of the general system.

"3d. That such a state of system frequently has for its cause hereditary predisposition; in other instances, it is induced by various functional disorders, while in a third class of cases, (perhaps the most numerous,) it arises from the conjoint effects of both these causes.

"4th. That consumption is to be prevented only by adopting such means as shall counteract the hereditary predisposition, (where it exists,) and maintain the healthy condition of the various functions, from infancy to the full development of the body.

"5th. That in the general disorder of the health which leads to tubercular cachexy, in tubercular cachexy itself, and even when tubercles are formed in the lungs, unattended with much constitutional irritation, a residence in a mild climate will prove beneficial; and also in cases of chronic consumption, at any stage, when the lungs are not extensively implicated in tubercular disease, and when the system does not sympathize much with the local disorder.

"6th. That in cases of confirmed consumption, in which the lungs are extensively diseased, and when hectic fever, emaciation, and the other symptoms which characterize its advanced stages are present, change of climate can be of no service, and may even accelerate the progress of the disease.

"7th. That climate, to be effectual in any case, requires to be continued for a considerable time: in most cases for years."

Chronic Diseases of the Larynx, Trachea, and Bronchia.—Although change of climate fails in producing beneficial effects in phthisis pulmonalis, there can be no doubt of its efficacy in irritations of the mucous membranes of the air passages. This is exemplified in the remarkable effect produced on common colds, even by a journey of a few days. In adopting this measure, however, Dr. Clark very justly deprecates sending patients from home before all acute inflammation is subdued. A journey at the commencement of a cold, or indeed of any other irritation of the trachea or bronchia, generally increases it; but if, on the contrary, the acute period of the disease has passed, change of air is perhaps the most effectual remedy we can apply. There is another point in connexion with this class of diseases which must be borne in mind, viz. the state of the digestive organs. Many, perhaps we may say a majority, of the bronchial irritations are sympathetic of some disorder of the stomach; at all events, these two pathological states coexist in a large proportion of cases. Hence, we shall make but little progress in the cure of the tracheal and bronchial diseases, until the irritation of the digestive organs is overcome.

Dr. Clark gives a decided preference to the climate of Madeira in this class of affections, especially when they occur in young persons disposed to phthisis. The pine barrens of Georgia and Carolina are also well calculated to benefit chronic disorders of the air passages. In the more protracted and obstinate cases, however, a course of mineral waters will often prove of the greatest utility, and materially increase the good effects of a residence in a mild climate. There are several mineral springs on the continent of Europe, which have high reputation in this class of diseases, such as Bonnes, Cauterets, Ems, and Mont d'Or. A selection of the particular mineral water must depend upon the nature of the case, and Dr. Clark gives a short sketch of the benefits to be expected from a residence at the principal mineral springs in the southern parts of Europe. Sufficient attention has not as yet been paid to those of our own country, to enable us to decide with certainty as to the relative advantages to be derived from a visit to them. Judging, however, from what information we possess on the subject, we should decidedly recommend those in the southern and south-western sections of the United States, from their combining all the benefits to be expected from these agents, added to their being situated in a warm climate.

Asthma.—In no disease perhaps is the effect of change of climate so conspicuous or powerful as in asthma. Taking the disease generally, it may be stated that a removal is beneficial; but the degree of

relief, especially in complicated cases, depends on the climate being suited to the particular case or complication. Our author gives the following forms, as requiring particular attention:—1st. Pure nervous asthma. 2d. Symptomatic nervous asthma. 3d. Humid asthma. 4th. Cardiac asthma. In this latter form, a voyage is much preferable to a land journey.

Gout.—Dr. Clark is of opinion, that the early stages of gout, where the patient possesses the resolution to adhere to such a mode of living as is calculated to remove the gouty diathesis entirely, are much benefited by a lengthened residence in a mild climate. In confirmed cases of the disease, where the joints are permanently affected, he also thinks that a mild climate improves the general health, and prolongs the interval between the paroxysms.

Chronic Rheumatism.—It is but too well known, that rheumatism often resists the best directed efforts of medicine, for, although we are able to remove its inflammatory or acute stage, it frequently torments the patient in a chronic form during the remainder of his life. In these cases, a removal to a warm climate sometimes acts like a charm, and indeed is the only measure which in the present state of our knowledge we can say affords a prospect of recovery. It should always be remembered, however, that rheumatism is complicated with, and kept up by a disordered state of the digestive organs, without the removal of which, the affection of the joints can scarcely be cured.

We shall not attempt to analyze the remaining sections of Dr. Clark's work, as they contain little that is interesting to medical men in this country. In concluding this brief analysis, we cannot avoid reiterating the high opinion we entertain of the value and practical utility of our author's observations, and can safely recommend it as the best guide book with which we are acquainted for all invalids who intend to visit the milder portions of Europe; and, although it is necessarily very local in its directions, it will well repay an attentive perusal from physicians in this country. R. E. G.

ART. XVIII. *De la Percussion Médiate et des Signes obtenus à l'aide de ce nouveau moyen d'exploration, dans les Maladies des Organes Thoraciques et Abdominaux.* Par P. A. PIORRY, D. M. P. &c. Paris, 1828. 8vo. pp. 336. Pls. lithogr. 2.

THE work before us may be regarded as one among the earliest and most valuable fruits of the seed first sown by the German physician AVENBRUGGER, and subsequently cultivated with such gratifying success by the illustrious CORVISART, LAENNEC, and their numerous disciples. Through the zeal, skill, and assiduity of these great benefactors of scientific medicine, the diagnosis of diseases of the chest was rendered easy and almost unerring; repeated examination of sound and diseased bodies, followed by carefully conducted dissections of the dead, enabled them, especially Laennec, to distinguish with wonderful accuracy the actual condition of the thoracic organs in the living body and finally to establish a system of rules or principles by whose aid, individuals devoting to the study a proper degree of attention might attain an equal accuracy and precision in similar investigations. Yet it is unfortunately true that suffering humanity has not, even to the present hour, received the full advantage of the improvements introduced by these celebrated men. Aversion to change of opinion, prejudice against every appearance of innovation, and a profound apathy concerning the real nature of proposed improvements, still continues to withhold physicians from making the enquiries and obtaining the experience necessary to the successful employment of these admirable aids to correct diagnosis. So prejudicial is the influence of such examples, that even youthful members of the profession are found willing to evade the supposed extra labour demanded for the acquisition of the requisite knowledge; and perhaps it will not be until the community becomes thoroughly acquainted with the importance and indispensability of such skill, that mediate auscultation and percussion will receive universal and profound attention from physicians.

If these modes of ascertaining the conditions of organs in health and disease, were not based upon physical laws as well ascertained and established as any others belonging to the circle of human knowledge—if their successful application depended upon any accident or trick, and if the results obtained by all equally experienced enquirers did not closely correspond, we might feel surprise that intelligent and benevolent physicians should refuse to be at the trouble of learning a new art of research. But resting as they do upon laws fixed

and unchanging, requiring nothing more than diligent application for their successful employment, and producing results most satisfactorily accordant with the experience of others or with our own previous examinations, we know not how a candid mind can hold itself free from imputation of guilt, which neglects to attain a competent acquaintance with modes of investigation so essential to correct treatment of disease.

Immediate or direct percussion, as introduced by Avenbrugger and Corvisart, is attended by some inconveniences, and liable to various objections in peculiar cases; it has consequently generally given place to the use of the stethoscope or mediate auscultation, which was so highly improved in its application by Laennec. But all those who have adopted the stethoscope have felt the advantage of using both methods, where it is practicable, and it was with the view of rendering percussion as generally useful and certain in its results as mediate auscultation, that Dr. Piorry with a laudable zeal devoted himself to the experimental researches which have eventuated in the present treatise on *mediate* percussion. In these studies he has had the assistance and advice of many distinguished practitioners, and on his own part displays a calm, candid, and philosophical spirit, which proves him to have been excellently adapted to conduct such observations. "If the facts, I publish," says he, "have not all the importance I attach to them, perhaps they will not be entirely lost, since experiments made with exactitude and candour are always of some value." Neither does his zeal for the advancement of a favourite pursuit, lead him to prefer mediate percussion to the exclusion of the stethoscope, or indeed of all other modes of examination. "To employ one mode of exploration to the rejection of others, would be proof of bad judgment. Such was not Laennec's conduct; incessantly approximating the results of percussion to those obtained by auscultation, he drew the happiest consequences from this parallel. Seeking to imitate him, I do not propose mediate percussion as an exclusive method of diagnosis, but think that it presents an additional way to the discovery of the actual condition of organs; and can we neglect any light, however feeble, in a difficult art, which is so closely concerned with the health and life of men?"

In his second chapter, Dr. Piorry treats of *direct* percussion, and specifies the inconveniences to which it is subject, and which are so serious and numerous as greatly to circumscribe its application. We do not think it necessary to repeat the observations made by him on this subject, as he has clearly established that *mediate* percussion removes all these difficulties and objections, and leads to far more cer-

tain and satisfactory conclusions. The substance of his remarks on mediate percussion, the instruments necessary to perform it, and the rules to be observed in its use, we shall now condense from the work.

Mediate percussion consists in the impulsion given to a solid and sonorous body applied upon an organ or over a cavity, with a view of obtaining a sound in relation with the physical condition of these parts. To obtain such results, we place solidly over the part to be explored, a thin plate of any hard substance, wood, metal, &c. upon which percussion is made. After various experiments, Dr. Piorry found that ivory united all the requisite qualities, was not subject to be warped like horn, and was free from that tinkling produced by metal, which is analogous to sounds furnished by some of the viscera subjected to mediate percussion. The instrument, made of ivory or other material, is called *plessimeter*, (from πλησσω, I strike, or πληξις, percussion, and μετρον, measure,) and the last modification of form adopted by the author is the following. A flat circular plate of ivory, presenting at two extremes of one of its diameters a projection four lines wide and four high; this projection, concave externally to suit it to the convexity of the finger, is placed perpendicular to the surface of the plate. It has the advantage of being easier steadied upon the surface than any other, augments the surface to be percussed, and facilitates percussion. He also devised a plessimeter to be attached to the common stethoscope, which was also of ivory, but in some cases this could not be used, as in peritonitis, pleurodynia, &c. where great pain results from the touch. The larger instrument may be used in these cases without injury. Other physicians have varied the form and substance of the instrument, but it is needless here to particularize unimportant changes.

It was not until after numerous experiments made in the anatomical theatre, in hospitals and private practice, that our author began to arrive at very satisfying results; nor was it until he discovered that his slow progress was owing to his own unskilfulness, rather than any defect in the method, that his researches tended to establish any important practical conclusions. He explored badly; did not apply the plessimeter with sufficient steadiness, and obtained variable sounds proportioned to the varied position of the instrument.

By adopting the following general rules the difficulties and uncertainties disappeared, and the advantages of this mode of exploration augmented with the increased skilfulness of its application:—1st. the patient's position must be varied according to the organ explored, and the sort of malady we seek to distinguish; this position is indicated in the proper place, when speaking of the mediate percus-

sion of the different organs and cavities. In general, as in using Avenbrugger's mode, or direct percussion, the trunk should not recline on too soft a surface, and strict silence is to be preserved among the bystanders. Often the position first adopted should be continued throughout the examination, as when there is no reason to believe in the existence of a collection of fluid. Again it may be necessary to change the attitude of the patient several times, as when we endeavour to discern whether liquids or moveable bodies are contained within a cavity or not. This last mode of scrutinizing is fruitful in practical results, and to avoid error may be well repeated frequently.

To obtain certain results from mediate percussion, it is necessary that the plessimeter placed upon the regions to be studied, should be lightly applied and steadied in such a manner as to form (so to speak) one body therewith. Sometimes we apply the instrument upon the naked surface, which is to be preferred, if the condition of the patient will allow and the disposition of the part to be explored require it; sometimes to remove the inequalities of the surface it is necessary to interpose some old linen or cotton; on other occasions we have to leave the clothing upon the chest to save the patient from chill.

When we percuss a painful region, and when this mode suffices to appreciate the physical condition of an organ, we are content to keep the instrument fixed by touching the integuments slightly with it. Whenever we examine a cavity with soft and extensible walls, a certain degree of pressure is to be exerted in order to give effect to the examination of the deep-seated viscus. In particular cases a very considerable force is necessary in making this pressure. It is sometimes necessary to keep the instrument invariably fixed, as when we desire to appreciate the sound of a single viscus; again, we glide it lightly over several regions, in order to compare together the sounds furnished by several organs.

The plessimeter being steadied by the left hand, percussion is performed with the pulp of the right fingers in the following manner:— The nails being pared close enough to prevent them from projecting beyond the surface of the pulp, as they otherwise sensibly modify and interfere with the results, the blow is struck upon the instrument with the end of the index finger alone, or with the index and next fingers united; sometimes even a third is added for the purpose of obtaining sound from a large surface. The part of the pulp which is nearest the extremity of the finger should, alone, strike the plessimeter, the sound being less pure in proportion as the contrary occurs. The shock ought to be clear; therefore the blow being struck the finger should be immediately withdrawn. It should be rapid in order that

vibrations may follow. We vary its force according to the volume of sound we wish to produce, the degree of sensibility of parts and the breadth of the plessimeter we employ.

So far from one percussion being sufficient, it is often to be repeated several times successively, to guard against erroneous impressions from a single sensation; and in general to judge of the sort of sound produced, it is well to reiterate the percussion sometimes forcibly and sometimes slightly.

Our author assures us that the objections made against direct percussion are entirely removed by the use of the plessimeter. Even when the teguments are very sensible and irritable, or the patient is exceedingly impatient, it may be used without increasing suffering, or causing injury. Yet it must always be remembered, that mediate percussion, as well as mediate auscultation, and every other mode of research, to be well known, and advantageously used, requires careful study, and continual practice. For want of the facility which can only be acquired in this manner, we find many individuals unable to derive advantage either from the stethoscope or plessimeter.

Mediate percussion over the different regions of the abdomen, promises the most valuable results, while direct percussion of the same parts is altogether unproductive of sound. The plessimeter here furnishes a sort of solid wall to the soft coverings of the viscera.

Each organ studied with the plessimeter has a special sound of necessity, since the nature and pitch of the sound produced, depends upon the density, capacity, and form of any instrument. A solid organ, like the liver, will give a dull or flat sound; a hard one, as a bone, will furnish a clearer note; the stomach, much distended with gas, causes a clear resonance; the small intestines, much narrower, and more retracted, produce less sound than the cœcum distended with air; the lungs, filled with vesicles separated by partitions, give a cavernous reverberance different from all the others, and the same may be observed successively of other parts. The sounds obtained will still vary according as the organs contain fluids or not, mixtures of fluid and gas, or the latter alone; hence, in studying mediate percussion it is necessary to establish a sort of scale of sonoriety between the different organs, and we may represent these degrees by letters or cyphers. So precise are the results furnished by mediate percussion, that we can determine upon a person in health, in sickness, or upon a dead body, the points to which certain organs correspond; and mathematically measure their dimension through the abdominal parietes. This is particularly true of the liver, spleen, stomach, cœcum, and distended urinary bladder.

The sounds produced by mediate percussion offer infinite varieties, referrible, 1st, to the species of organ explored; 2d, to the different conditions of the organ; and 3d, to the peculiarities of the individual examined. But the practical results depend less upon the fundamental character of the sounds, than upon the comparison established, in the same individual, between the sounds furnished by different organs. In one subject the cœcum gives a much clearer sound than in another; but in both, in a state of health, we distinguish with equal ease the cœcum from the small intestines, because the cœcum always gives a more tympanic sound. The same considerations are applicable to the other viscera. In general the sound produced by the plessimeter varies from *more* to *less*. The former is given by the most hollow organs, containing the greatest quantity of gas, the largest, and most superficial seated. The latter, or lesser sounds, correspond to the least hollow parts, the most dense, thick, and deeply lodged. The stomach, cœcum, and buccal walls, distended with air, constitute the first term, while the thigh, and fleshy part of the arm, form the last; certain cases may be met with in abnormal conditions, above and below these limits. Peritoneal tympanitis gives a clearer resonance than the stomach distended by gas, and the flat, dull sound, arising from a vast encephaloid or scirrhous tumour, is more marked than that of the arm or thigh.

Certain sounds obtained by mediate percussion have sometimes an entirely peculiar and proper character, to distinguish them from the preceding. Some are produced by applying the plessimeter over organs naturally very hard and sonorous, as the bones; by applying the instrument upon the inner face of the tibia, and percussing, a correct notion of this peculiarity may be formed; other more important sounds consist in a trembling or oscillation, which is very remarkable, and has some relation to the metallic tinkling of Laennec. It may be designated by the term *humoric* resonance. Being more acute and harmonic than other sounds, considerable skill is required to distinguish it. It occurs under the following circumstances:— 1st. When a hollow organ is partly filled by gas, and by serosity, as frequently is the case with the stomach. 2d. When a viscus, forming a cavity with thin walls, floats in a fluid, which is sometimes remarked in ascites. 3d. When two hollow organs are in contact, one containing a liquid, and the other gas; thus the distended urinary bladder may be in contact with the intestines containing elastic fluids. 4th. When air escapes with difficulty through a narrow opening from a large cavity, which appears to take place in certain cases of tuberculous caverns. Humoric resonance is most commonly

met with at the point where liquids and gases are in contact; it is thus that the superior layer of fluid contained in the stomach, touching the gas contained in this viscus, the surface of the serosity in ascites touching the intestines, &c. give the humoric resonance.

Finally, there is another much more singular sound which our author has but very rarely observed, and it is impossible to express the sensation it causes in words. It seems to refer itself at the same time to the percussing finger and the ear: the finger feels a sort of elastic resistance which repels it, and that several times successively; the ear hears a sound which differs from, though somewhat similar to, the humoric resonance. Every thing leads to the belief, that in the cases it was met with by our author, the cause of it was hydatid tumours.

Although it is difficult to trace a precise limit between the sounds in relation to their degree and nature, it appears useful to establish a sort of scale of differences, and for this purpose it is necessary to give them names, or to designate them by letters. To render the study of mediate percussion easier, the author has endeavoured to designate them by names which refer them to healthy organs, as may be seen in the following table:—

F.	——	Femoral sound	Resulting from mediate percussion	Of the Thigh.
J.	——	Jecoral sound		—— Liver.
C.	——	Cardial sound		—— Heart.
P.	——	Pulmonal sound		—— Lungs.
I.	——	Intestinal sound		—— Small intestines.
S.	——	Stomacal sound		—— Stomach.
O.	——	Osteal sound		—— Bones.
H.	——	Humoric sound		—— Organs filled with air and water.
Hy.	——	Hydatic sound		—— Hydatid tumours.

Various intermediate sounds exist, but this inconvenience attaches to all our divisions, to which natural phenomena but partially accommodate themselves. To express these variations as near as possible, the author says, such a region furnishes a sound between S. and I. (between stomacal and intestinal,) to express that the sound is less clear than that to which the stomach inflated with air would produce, but more drum-like than would be caused by percussion over the small intestines. As variable sounds may be combined with different degrees of sonorousness, he endeavours to express it by a similar method; thus when it is said that a certain part furnishes a sound between I. and H. (intestinal and humoric,) it is understood that the intestinal and humoric resonances are combined.

The next part of our author's labour, is to divide the trunk into various regions for the greater convenience of exploring the states of the organs. As we are more desirous of imparting a correct notion of the principles upon which mediate percussion is to be practised, we must refer the reader to the original for such details. Instead of following him through these divisions, we shall next attempt to sketch some of the conditions in which mediate percussion promises direct advantage to the physician.

The cavity of the thorax comprising various organs differing in density as in office, in a state of health yields clear indications to the student of mediate percussion of the situation and actual condition of its contents. When by the occurrence of morbid actions, changes are produced in these parts either as to their density, the quantity or nature of their fluids, or the functions they discharge, mediate percussion discriminates them with an ease and certainty proportioned to the familiarity and accuracy of our knowledge of them in their healthy state.

In examining the walls of the thorax, it may be our object either to appreciate the nature of their lesions, or to explore the deeper seated viscera, by thus avoiding the inconveniences that might result from direct percussion.

Mediate percussion will distinguish the nature of tumours developed in the walls of the thorax; indicates the difference between emphysema of the cellular tissue of the walls of the chest and œdema, by the greater clearness of sound in the first instance; a hernia of the lungs however small by its highly marked and very superficial pulmonal sound, and a hernia of abdominal viscera between intercostal spaces will be equally obvious from the peculiar sounds belonging to these organs.

The pleura is subject to very few changes discoverable by mediate percussion, and the researches of Morgagni, Bichat, Laennec, Andral, &c. prove that thickening of the pleura is very rare, if it occur at all; and in cases where it appears to be thus changed, it is owing to a pseudo-membranous layer, or effusion deposited upon the surface, or to the development of miliary granulations thereupon. Cartilaginous or osseous degenerations of the pleura, most frequent at the summits of tuberculous lungs, sometimes acquire considerable thickness.

The serosity secreted by the pleura may be increased in quantity, and according to Laennec, this takes place in a constant manner when the pleura is inflamed; several other authors do not believe this augmentation to be constant, but regard it as incomparably the most fre-

quent case, and do not admit of a pleurisy without effusion, unless as an exception to the rule. This serosity varies in consistence with the different degrees and duration of pleurisy. The collection is sometimes free, sometimes circumscribed by adhesions, in various parts of the chest. But wherever seated, the lung or lungs must be compressed, and if the effusion be very large the neighbouring organs may be displaced. Effusions of blood may occur within the pleura, and the fluids of pulmonary abscess or hydatid tumours may be poured out into it, in consequence of ulceration; or atmospheric air may be introduced by means of an opening through the thoracic walls, or through a laceration of the lung, from whatever cause.

These observations are followed by a statement of numerous experiments, relative to the exploration of the pleura in healthy and morbid conditions, and from the whole, the following corollaries are deduced. 1st. In natural hydrothorax whether observed in the living or dead body, as in artificial effusions into the pleura after death, if the pleural cavity be free, the fluids occupy the declining part of the chest. 2d. A level line most commonly, if not constantly separates the points where the fluid is found from those where it does not occur. 3d. The fluid forming a thin layer towards its superior surface increases in thickness as it is examined lower down. 4th. When the quantity of serosity is so great as to fill the pleural cavities no level takes place. But then the extent of flat sound is an excellent sign of the acute state; for it is very rare for a peripneumony to affect the whole of a lung. 5th. The sound given by the thorax at the points where slight pleuritic effusions exist is not flat; it generally holds the mean between the sound produced by the heart, and that furnished by the lung. It approaches the first more than the second in proportion to the amount of effusion. 6th. If the quantity of fluids be so great as to occupy the entire cavity of the pleura, the sound approaches that produced by the liver. It appears, however, that this organ uniformly gives a more marked flat sound than that observed in hydrothorax. 7th. If the lung be healthy, the sound obtained above the effusion is similar to that given by the respiratory organ in the normal condition. 8th. The sound below the effusion presents the characters already indicated 5 & 6. 9th. It is upon a level line that these differences of sound subsist. This line is parallel to the axis of the trunk when the patient is lying down; perpendicular thereto when he is in the erect position; the resonance is obscure behind, and clear in front, if the patient be placed upon his back, and the contrary if lying upon the face. It is dull below and clear above, when the subject is seated. 10th. When there is very little fluid effused it is to be sought for pos-

teriorly and upon the sides of the vertebral column; the patient may be placed in various attitudes to favour the research.

The author accounts for some differences between his conclusions and those of Laennec, by referring to the fact that this great observer made use of *direct* percussion, which certainly will not indicate many of the peculiarities mentioned in the foregoing corollaries. But the aid of the plessimeter, or *mediate* percussion, renders the slightest of these variations so obvious, as to enable the examiner to distinguish them with ease. Notwithstanding all that has been done, it is certain that the diagnosis of pleuritic effusions still remains doubtful, and this should urge upon practitioners, the necessity of using and perfecting every mode of investigation capable of leading to more positive decisions and advantageous treatment.

In treating of the application of mediate percussion to diseases of the lungs, our author premises a concise sketch of the respiratory organs in a state of health, and then describes the changes to which they are most liable from morbid action. The 1st is, variation in volume, generally dependent upon the state of the adjacent organs. Extent of thoracic cavity, dimensions of the liver and heart, distention of the stomach, pleura or pericardium by fluids or gas may all cause variation in the volume of the lungs, which are occasionally reduced to a very small mass, or considerably expanded; their texture may be denser or rarer, and in numerous cases extensive caverns are excavated in their substance. 2d. The lung may augment in density from various causes:—it may be the effect of simple cadaveric engorgement occuring in the last moments of life, or immediately after death This alteration is altogether dependent upon the laws of gravity, whether it take place in the air cells, or which is more probable, into the cellular texture uniting the lobules. If this accumulation is formed exclusively of serosity, œdema of the lung ensues, and in debilitated subjects, it occurs nearly as in dying individuals; air almost always remains in several bronchi and many vesicles of the engorged texture, &c.

Inflammation increases the density of the lung, but as this occurs during life, the disease does not uniformly occupy a depending part, and when it does thus happen, the point where the healthy texture is separated from the diseased, is not a right line, but follows the inequalities of the different lobes or lobules; frequently the parts placed below the inflamed portions are not affected by peripneumonic engorgement. Here there is less of air in the vesicles and small air tubes, because the fluids are first deposited in the last divisions, and must push before them and compress the gases they contain.

These fluids being more viscous than in cases of simple engorgement, adhere to the surface of the cavities containing them, which prevents their easy descent to the most depending part. This more especially is the case, if they be condensed by absorption, evaporation, or vital actions taking place, or the texture of the lung itself acquires greater density by the inflammatory process. It is to all these causes combined that the very great density of the lung is to be attributed, when peripneumony has extended to its second or third degree, yet in all these cases, it very generally is the fact, that the larger air tubes still contain air. Engorgement may produce pneumonia in subjects which continue to live for a certain time; and pneumonia on the other hand by softening the textures, disposes still more to engorgement. Hence these two states are found combined in many cases; and in the dead subject as in the living patient, no striking difference can be established. The same may be said of pulmonary œdema. Hæmorrhagic infiltration converts the lung into a hard texture, which no longer contains air. Encysted tumours have been observed, though rarely in the parenchyma of the lungs. Lastly, the density of the lungs may be augmented by tubercles, which in various conditions form considerable masses, and occupy various extents of the pulmonary structure; they occur frequently at the superior part of the lungs, more commonly on the left than right side; while peripneumony according to Laennec takes place more frequently in the inferior lobes. Attempts have been made to derive advantage from this fact relative to the etiology of phthisis. Dr. Andral, however, has proved that pneumony of the superior lobe is far from being of such rare occurrence as supposed. Tubercles are sometimes superficial, and at others deep-seated like other accidental productions found in the lung.

3d. The density of the lungs may be diminished, either because the bronchi are more than usually dilated to their fourth and fifth divisions, or even as far as the aerial branches which are the seat of alternate expansion and contraction; or, the air vesicles may be dilated, constituting the *pulmonary emphysema* of Laennec. These cells may become as large as a cherry-stone, though this rarely happens, and scarcely without rupture of the septa of cells. Sometimes the emphysema occupies both lungs, or one; a whole lobe or some part of it. In cases of this nature, a given volume of pulmonary texture contains the most of air, and the least of solid parts. A circumscribed dilatation may take place in an air tube forming a cavity sufficiently large to contain a nut; around such an excavation the texture is crepitant. A vast abscess may be formed in the centre of hepatised masses of lung, and if this be emptied by expectoration, the

large cavity it leaves is surrounded by a hard texture impermeable to the air. A cavern following a pulmonary tubercle, may be almost immediately surrounded by a slight and crepitating texture: this however is rare, and most frequently very dense tuberculous masses circumscribe the cavity, or the pleura, become more resisting, surrounds it upon other points. The lung may be partially gangrenous, and when the part destroyed has softened and been thrown off, it leaves a cavity surrounded with a texture rendered denser by the inflammation which has occurred. In all cases of excavations, they may contain fluid, or gases, exclusively, or both combined; and may or may not communicate with the bronchial cavities.

Our author next relates various experiments made upon dead, and living bodies in health and disease, relative to the sounds afforded in different states of the lungs, whence he deduces the subjoined corollaries:—

The points where the lungs are more dense than in the healthy state, give usually a flat or dull sound. In cadaveric infiltration the flatness or dullness closely approaches that of the region of the heart, and is found in the part of the lung most dependent, during the time immediately preceding and after death. In general it is upon a nearly level line, that the differences between the sound and engorged lung are perceived. In engorgement the place where the resonance changes character, does not vary with the attitude of the patient, which distinguishes this condition from pleuritic effusions. In peripneumony it most often happens, that a moderately flat sound is not exclusively obtained towards depending parts, as it is found at other points of the chest. When inflammation is exclusively confined to the inferior part of the lung, it very rarely happens that the superior surface is on a level; as is most common in cadaveric engorgement. The plessimeter distinguishes these inequalities. This difference and rather more dullness of sound in peripneumony than in cadaveric infiltration or œdema of the lung, are very good means of distinguishing these different states. Similar considerations are applicable to pulmonary apoplexy.

A dull or flat sound obtained in the supra clavicular and anterior pulmonary regions, (while the rest of the chest gives the pulmonal resonance,) affords a very constant character of tubercles. Where considerable tubercular masses exist, the sound approaches rather to the pitch of J. than C. But it must be remembered that hepatization of the superior lobe of the lung, is more frequent than is commonly supposed. A degree of sound less clear upon one side than the other, observed habitually above and below one of the clavicles, may lead

us to suspect numerous miliary tubercles. When a duller sound is heard throughout the whole of one side, than the other, or very marked differences of sound at different points of the same side, without coexistent functional signs of peripneumony, it may lead to the belief that tubercles are generally scattered through the lungs, and separated by a texture more or less healthy.

The following are Dr. Piorry's conclusions, from all his observations and experiments, concerning the sounds furnished, when mediate percussion is applied to the investigation of cavities in the lungs.

1st. At the point corresponding to large, empty, superficial excavations surrounded by hepatized or tuberculous portions of lung, themselves circumscribed by healthy pulmonary texture, a tympanic sound (S. or I.) is obtained, whose intensity is proportioned to the dimension of the cavern. This sound will be easiest found during a strong inspiration; around the point where it is obtained, the sound is near C. or J. and the P. resonance circumscribes the space where these last sounds are heard.

2d. In similar excavations surrounded by healthy pulmonary texture, in dilatation of the bronchi for instance, a tympanic sound whose pitch ought to correspond to the dimension of the cavern probably exists over, and a pure P. sound should be heard around it.

3d. When the excavation is large, deep-seated, and covered by healthy pulmonary cells, it may happen, that over the point corresponding to the cavity, the sound S. may be obtained, mingled with P. In such case, if mediate percussion be performed with much lightness, it should give the pure P. sound; if on the contrary it be executed with greater force, the cavernous reverberance should be heard. In slight excavations the tympanic sound is not perceived.

4th. If the excavation be half filled with fluids and gas, and if there be free fistulous communications with the bronchi, the resonance H. is produced; this may also occur when the cavern is deep-seated.

5th. The H. sound may be heard when there are small excavations; its intensity is then proportioned to their distance from, or nearness to the surface.

It would be to us a task as pleasant as profitable, to continue to follow our author in his researches concerning the diagnosis of diseases of the heart, stomach, liver, and abdominal organs generally, but we have already extended this paper to a sufficient degree; more especially, if we have succeeded in exciting the reader's curiosity to examine Dr. Piorry's interesting work for himself. This examination made in a spirit of candour, would, we feel persuaded, be sufficient

to determine most persons to adopt his mode of exploration, so far at least, as to decide from actual experience what aid may be relied on from it, in distinguishing the morbid changes of organs. This course would require that it should be persevered in, until the enquirer should be sufficiently skilled in the use of the instrument to be quite sure of not charging upon the method, his want of expertness, and inaccuracy or dullness of hearing. It is a remark we have many times heard from physicians, that they never could derive advantage from the stethoscope, when perhaps, they had not in their lives practised its application as many as fifty times! How is it possible that ears totally unused to discriminate between faint and peculiar sounds, should at once adapt themselves to such nice distinctions? The experienced surgeon or accoucheur, whose "learned touch" conveys to him the most accurate information, and enables him to discriminate soft and delicate structures with as much certainty as if they were displayed to his sight, arrives at this degree of skill after long-continued practice and constant attention. To him it would seem very ridiculous, should a tyro assert that he had several times tried to distinguish vessels, &c. by the touch, in vain, and thence come to the conclusion, that such skill was not to be acquired. Yet, in fact, this is not more ridiculous, than that those who have used the stethoscope or plessimeter but a very few times, should, from such an experience, decide against the value of the instruments, and withhold their invaluable benefits from patients, by neglecting to learn how to use them.

Many persons, with a view of excusing themselves for such neglect, enquire, if they cannot make out a sufficiently correct diagnosis by other signs afforded by functional disturbance, pain, &c.? This may be answered in the negative, and very positively, in a very large number of cases. The discrimination of diseases of the lungs, heart, and organs immediately connected with the chest, can never be made without the stethoscope, as may be done with it. The general condition of organs may indeed be *inferred;* but nothing beyond probability is arrived at; by the aid of the stethoscope, (and now, according to Dr. Piorry, with the plessimeter,) certainty of diagnosis in a large number of most important cases, may be attained. But, if such proceeding were not too invidious, we might refer to a very large collection of instances, in which the diagnosis laid down by physicians of eminence and experience, have been proved totally erroneous by application of the stethoscope, and patients restored in consequence to hope and life by the substitution of totally new views of their diseases and modes of treatment. Other cases might be adduced, in which men of celebrity, (but not condescending to such innovations

as the stethoscope,) have pronounced the disease to be such and such, and instituted the treatment therefor. Examination of the dead bodies of these patients have shown, that had the stethoscope been properly resorted to, the true character of the disease would have been at once obvious, and a course of treatment instituted, perhaps directly opposite to that actually and unavailingly employed.

To those who have the advantage of now commencing the study of medicine, we cannot avoid urging upon their most serious consideration, the study of mediate auscultation and percussion, (as taught by Laennec and Piorry,) both as a sacred duty to patients, and the most certain means of securing confidence and business, from the superiority it will confer over all those who have slighted such acquisitions. We hope the time is not far distant when those who are ignorant of these modes of research, will cease to be entrusted with the treatment of thoracic diseases; as under all circumstances, he must be allowed to be the best qualified for such trusts, who in addition to the common stock of information, is superior to his competitors by the possession of a highly cultivated sense, of whose use they are ignorant.

J. D. G.

BIBLIOGRAPHICAL NOTICES.

XIX. D. Francisci Caroli Naegele, *Professoris Heidelbergensis, Epistola ad Theodorum Fredericum Baltz, M. et C. D. qua Historia et Descriptio Aneurysmatis quod in Aorta Abdominali observavit, continetur, addita tabula aenea.* Heidelb. 4to. pp. 18. pl. 1.

Aneurism of the inferior part of the abdominal aorta is a disease of rare occurrence, while nothing is more common than to find the arch of the aorta in this condition. It is, therefore, not surprising, that the true character of the disease, when it takes place in the first mentioned situation, should not be immediately and clearly recognised; and this renders it desirable that an accurate record should be kept of such cases as may fall under the observation of practitioners. Professor Naegele, in his epistle to Dr. Baltz, has given a very interesting account of an instance of aneurism of the aorta, occurring just above its division into the common iliacs, which we here translate for the benefit of our readers.

The patient was a lady, who, with the exception of a slight curvature of the spine, caused while at school, was of large stature, and firmly built, though graceful and well-proportioned. At the time of her death she was thirty-three years old. She was one of a considerable number of children of the same parents, and her father, who died of hydrothorax when seventy-two years old, was subject to gout and rheumatism, as were some of his sons also. In her infancy, her dentition was accompanied by many difficulties; and from her fifth to her sixth year, she suffered much from ophthalmia. About this time the slight flexure of the spine was perceived, for which some mechanical contrivance was worn. From fourteen to seventeen her health was very imperfect, and she was often affected by œdema of the feet, which at the same time were covered by brown spots. Menstruation began at seventeen, and continued with perfect regularity throughout her life. At the age of twenty-two she married, and except some rheumatic pains, and slight fevers, enjoyed for several years good health, being of robust constitution, and very beautiful. Her temper of mind was severe, sad, and easily yielding to the influence of imagination, which could not be excited to the least liveliness, nor hilarity. Her attention was exclusively devoted to domestic affairs, and the care of her health, which in fact received more than a due share of regard. Her relatives had no knowledge of her ever having suffered any violent blow, or other mechanical injury that could have given origin to her disease.

Her first pregnancy increased her sadness and moroseness. She sometimes complained of pain; and in the seventh month was delivered of a dead and putrescent child. She soon recovered her usual health, but during the next year the brown spots on her feet ulcerated, and remained incurable. At the same time, a tumour formed on her left knee, which sometimes increased, and at others diminished, according to the state of the weather. Her second pregnancy

terminated in the eighth month by the birth of a dead child. During this pregnancy she suffered greatly from anxiety about the præcordia, which, with her usual sadness, was much increased by dread of again having a still-born infant. The third pregnancy was not more fortunate than the former: her anguish increasing at each period, and her mind tormented by fear. Hence she was desirous of taking medicines, and of seeking the best medical aid, both because she was exceedingly desirous of living, and of bearing a living child. Although she was of a fine figure, and except the left hip being a little higher than the right, no irregularity could be discovered in the pelvis, yet in her fourth pregnancy her physicians persuaded her to keep in a reclining posture as much as possible, because they believed her unfortunate miscarriages to be caused by some deformity of the pelvis; to this advice she yielded such implicit obedience as actually to pass four months almost entirely in a horizontal position, notwithstanding all the inconveniences and increased suffering it produced. At length her sufferings became so great that it could no longer be endured. Fourteen days sooner than natural she was affected by parturient throes, which subsided for eight days, at which time she was delivered of another dead infant.

Her fifth and last pregnancy was attended by an accumulation of all her distresses; her mind being continually racked by fear of producing another dead child, and her imagination filled with sad and horrible fancies. Having observed that her three preceding deliveries commenced about a fortnight before the usual time, and the orifice of the womb was then dilated, though the pains ceased, and at some future time the birth of an inanimate fœtus ensued, the physicians resolved to observe this commencement of the pains more closely. Finding that the labour came on as before, and observing at the time signs of life in the child, they turned, and delivered it without delay. It was a very delicate and emaciated infant, but gave some signs of being alive. The placenta was of firm texture, and having a dense, sharp, solid, and almost cartilaginous margin; over its surface many earthy concretions or ossifications were scattered; the condition of the placenta in her other labours had been somewhat similar.

To œdema, coldness, and dryness, as well as occasional ulceration of the feet, she was always subject; and the swelling of the feet appeared to afford relief to her pectoral distress. The skin of the feet became hard, rough, crusty, and rugose, occasionally desquamating, and having the appearance of belonging to an old woman.

For the last four or five years of life she was afflicted with palpitations of the heart, which often intermitted for a long time, yet always returned more vehemently, accompanied most frequently with an equal, but stronger sense of pulsation in the abdominal aorta. Gradually these attacks became more frequent; varying in force; returning at night when not felt during the day time. Every thing affecting the mind increased the palpitation; the excitement of coition during the three last years of her existence, uniformly caused the most dreadful fits. She was subject to vast pain, constriction of the chest, impairment of circulation, congestions of the head, &c. Her physician at this time believed her disease to have been dropsy of the pericardium, and treated her accordingly; and of course in vain. A very skilful physician, who attended her closely

during eight days of the next year, was induced by the symptoms to believe that her disease was aneurism of the aorta; and from the distress and suffering experienced in the thorax, and some difficulty of swallowing, he concluded it to be seated about the arch of the vessel; a conclusion which led him to neglect any examination of the abdomen.

In November of 1814, she had at night a dreadful attack of palpitation, extreme anguish, spasms, vehement dyspnœa, convulsions, loss of sense, paleness, coldness, &c. Indeed, she was believed to be dead, and was very slowly recovered. From what was told the author, he thought the attack to have been similar to that following violent uterine hæmorrhage. It was five days after this attack, (16th November,) that professor Naegele visited her, not having seen her for half a year previous; he could scarcely recognise her. Her face was pallid and greatly changed, by emaciation; the slightest motion excited palpitation; the pulse was feeble, scarcely discoverable, and altogether irregular, and during the rest of her life, which ended on the 28th November, it was impossible to observe in it the slightest approach to regularity. Her breathing was free; the mind tranquil; feet cold. A hard oblong tumour situated a little to the left, extending from the superior to the inferior part of the abdomen, which pulsated vehemently but regularly, could be distinguished by applying the hand. The pulsation was so powerful, that pressure with both hands could not restrain or diminish it. As the patient's condition was so obvious, nothing could be done but to lessen her sufferings as much as possible. She died, however, in a few days.

Examination of the body.—THORAX. Except some slight adhesions, lungs sound; heart rather smaller than usual; great vessels altogether empty of blood. ABDOMEN. Bluish-black tumour in the hypogastric region, rather to the left side, prominent, and of the size of a human head. The intestines being removed from the tumour, its rounded part evidently occupied the abdominal aorta, yet not entirely. Its anterior surface covered by the peritoneum, was very smooth. The heart with the whole aorta was carefully removed; the tumour by itself, weighed nearly five pounds, apothecaries weight. The greater part of the tumour was composed of strata of coagulated blood, which being removed allowed the true character of the aneurism to be seen. The dilatation began about an inch and a half above the origin of the cœliac artery, where the aorta traverses the crura diaphragmatis, and gradually increased down to the giving off of the renal arteries; immediately below which the true sac or greater tumour began to swell out, thence down to the extremity of the undivided part of the aorta, or to the bifurcation into the common iliacs. The total length of the dilated portion of the aorta was eleven inches; the great sac was very near six inches long and five inches in breadth. The caliber of the vessel was not altogether equally dilated, but more from both sides and in front. A very small chink or slit was found to the right of the origin of the inferior mesenteric artery, through which it is probable that shortly before death, blood escaped into the cellular texture, so that the aneurism, which was a *true* one from the commencement, had at length become what is termed *spurious*, and the immediate cause of death. This evidently was a true aneurism as all the arterial coats could be distinctly traced by the knife throughout the whole dilatation. Throughout the whole of this aorta, osseous points, squamules, and lamellæ were found in

the substance of its tunics. The walls of the aorta were increased in thickness throughout the dilatation, and the great or inferior sac had them thickest. Both iliac arteries were very thin, and it was very remarkable that instead of arising from the trunk by an acute angle, they formed a very slightly curved line. The gouty and rheumatic diathesis inherited from the father is supposed to have been the predisposing cause of this disease.

We have no remark to offer concerning this case, but the following:—a proper use of the stethoscope would in five minutes have declared the real character of this disease, whose true nature was not determined for five years; and then when the patient was almost extinct. It would have positively indicated that the heart, pericardium, lungs and arch of the aorta were sound, and could not have failed to lead a judicious examiner to the knowledge of the precise location and extent of the enlargement. By this elucidation of the case in its early period, such a treatment might have been instituted as would have saved the patient from a vast deal of unnecessary suffering and medicine, and very probably have sustained her in comparative comfort during a long and useful life; while for want of a sufficiently early and correct diagnosis of her disease, she was relinquished to exasperated sufferings and a premature grave. Can any stronger inducement be held out to those who are ignorant of the science of mediate auscultation, to apply themselves with diligence to its study?

J. D. G.

XX. *A Treatise on Pathological Anatomy.* By William E. Horner, M. D. Adjunct Professor of Anatomy, in the University of Pennsylvania, Surgeon at the Infirmary of the Philadelphia Alms House; Member of the American Philosophical Society, &c. Philadelphia, 1829, 8vo. pp. 456. Pls. III. of which II. are exquisitely coloured.

From the perusal of this treatise we have derived unequivocal satisfaction, and are of opinion that it will add largely and lastingly to the scientific reputation of the author. It came to hand too late, or we should have prepared an ample analysis of it for the present number of the Journal, but must on this occasion be content to give a brief notice. Like all the other works of Dr. Horner, it has necessarily been prepared at intervals of leisure and abstraction from the cares of active business, yet we are happy to perceive in it few marks of haste, and a very considerable degree of that elaboration of expression, which is so essential to the permanent usefulness of every didactic work. Perhaps few individuals, could be found in our country, uniting so many of the essentials to the successful preparation of such a work, as Dr. Horner; his experience as an army surgeon; his anatomical labours, under the immediate care and inspection of the zealous and indefatigable Wistar; his many years devotion to practical anatomy in the university, in aid of Dr. Physick, and the opportunities he has enjoyed of studying pathology in the ample Infirmary of the Alms House, all conspire to fit him for the task. To these advantages may be added the rich and extensive field of observation, thrown open to him by his medical brethren, who have long been in the habit of confidentially inviting him to make anatomical examinations of their deceased patients; this confidence, highly creditable to all concerned, has been of much value in the preparation of this treatise, and is ac-

knowledged by the author, with a fullness of satisfaction which shows him to be conscious of having justly deserved it.

In addition to the advantage of having a judicious and accurate treatise upon pathological anatomy, we confess to the unphilosophical weakness, as some call it, of deriving pleasure from the circumstance of its being the production of an AMERICAN, and to a very satisfactory degree, a work of original observation. We have a higher gratification in Dr. Horner's avowal, that his researches have led him to become a disciple of what is called the modern school of physiological medicine, because we are glad to find the correctness of our own decisions on the same subject, confirmed, by a cautious investigator of such extensive experience, and because we believe that the ultimate improvement of our profession, from the labours of that school, will be greater than ever was effected by all its predecessors.

For the present, without attempting to give an account of the plan of the work, we can conscientiously commend it to the members of the profession, as a satisfactory, interesting and instructive view of the subjects discussed, and as well adapted to aid them in forming a correct appreciation of the diseased conditions they are called on to relieve. J. D. G.

XXI. *A Treatise on the Cutaneous diseases Incident to Childhood; comprehending their Origin, Nature, Treatment, and Prevention.* By WALTER C. DENDY, Surgeon to the Royal Infirmary for Children, &c. 8vo. pp. 289. London, 1827.

Cutaneous diseases are from many obvious reasons subjects of so great interest to the medical profession, as to make any apology for presenting a brief outline of the volume before us altogether unnecessary.

Passing over much general information in the introductory chapters, relating to the prevention of infantine eruptions, aliment, the employment of laxatives, ablution, &c. as of minor importance, we shall enter at once on the more immediate objects of the work. Cutaneous diseases are arranged by Mr. D. under the following heads:

1st. *Those* which are symptomatic of disorder in the alimentary viscera.

2d. *Those* symptomatic chiefly of deranged chylopoietic functions, usually marked by debility.

3d. *Those* usually symptomatic; arising also from extraneous excitement; depending probably on peculiar idiosyncracy.

4th. *Those* consequent to specific infection, and

5th. *Those* which are local; usually accompanied by little or no constitutional derangement.

Of those diseases which are symptomatic of disorder in the alimentary viscera, the first which comes under our notice is STROPHULUS, called also by the popular names of red gum, white gum, milk spots, tooth-rash, &c. The varieties of this genus are exclusively confined to the infantile period of life, and are merely degrees of the same affection. *Strophulus intertinctus*, the mild red gum, is an eruption of bright red papulæ interspersed with minute stigmata, and with red circular patches. Their duration is variable, sometimes disappearing in eight or ten days, at others not under a fortnight. Sometimes the stigmata coalesce, and where there is excessive vascularity and irritability of the skin,

they form circular patches of a deeper red colour, more elevated than those of simple *intertinctus*, with distinct papulæ scattered over them. In this form of the disease there is a disposition to superficial ulceration, particularly if rubbed or scratched. There is one peculiarity deserving of notice, it is that in this form of papulæ there is a tendency to become *erratic*, portions of the integuments at remote distances becoming successively its seat; it is hence termed by Willan *volaticus*. Minute vesicles sometimes appear among the papulæ, occasionally filled with a straw-coloured fluid; the contained fluid is often removed by the absorbents, or the cuticle becoming abraded, ulceration may ensue, and the disease degenerates to one of a more aggravated character; sometimes even into contagious scabies.

Strophulus albidus, or white gum, consists of minute opaque pearl-coloured spots, and is occasionally interspersed among other varieties of this disease. Where the papulæ are distributed over a more extended surface, it is called rank red gum, or tooth-rash. The term *Strophulus candidus* is applied to an eruption of a few large white papulæ, with very slight inflamed bases, occurring as the sequelæ of some acute infantine diseases, as pneumonia, &c.

The exciting causes of strophulus, are dentition, and irritation in the primæ viæ.

Treatment.—Tepid ablution thrice a day, and light clothing. If convulsions supervene from the recession, a slight stimulating liniment may be rubbed on the sternum, or sinapisms to the soles of the feet. The food should be cautiously administered; and the nurses milk should be bland and nutritive, clear, and of a bluish colour. Laxatives are indicated; in slight cases a mild aperient taken every second or third day would be sufficient, or two or three grains of carb. magnes. and pulv. rhei may be given every night. If the derangement of the bowels is caused by dentition, free incisions of the gums should be resorted to. When the papulæ frequently recur, even during attentive treatment, it will be proper to change the nurse, which is often promptly beneficial. There is a variety in which there is evident debility, which may terminate in fatal marasmus. Papular clusters arise in different parts of the body, and terminate in brown exfoliations. A gentle laxative should be given every second day, and carb. sodæ with columbo or cascarilla, or the aqueous solution of tart. ferri in small quantities, frequently repeated.

Prurigo, *Psoris papulosa*, does not frequently occur in children. It is an eruption of very faint pink papulæ, with a very slightly inflamed base, accompanied by intense itching, which when it becomes aggravated is combined with formication. When the papulæ are lacerated by scratching, there is an exudation of watery sanies, which forms thin crusts of an amber or black colour. Sometimes where the habit is gross, friction will result in a superficial ulceration, or a true pustule. It is not contagious, but has nevertheless been imparted by the mother to the sucking infant. The most frequent cause of this disease in infants, is disorder of the alimentary canal. In some cases it appears shortly after swallowing some peculiar liquid or solid or from excess of ordinary food. A copious draught of cold water, when heated, not uncommonly causes this eruption. It may be caused by eating fish out of season, and by drinking acetous fluids.

Treatment.—In mild cases, warm bath or tepid ablution, with sulph. potassæ,

℈ss. ad ʒss. or lac sulphuris, ℈j. ad ʒj. twice a day, will be effectual. In the more aggravated form we must amend the gastric secretions and remove external irritation by a light, nutritious diet, (as melted jelly or asses milk, &c.) a laxative every second morning, and combinations of sulphur, soda, and columbo twice a day, or arsenical solution, gtt. ij. to vj. thrice a day. Mr. Wilkinson's plan is pil. hyd. sub. c. o. n.—sol. min. ter die. Aromatic vinegar applied on a probe to the prominent papulæ and then this ointment: ℞. sulph. sublim., picis liq. axung. āā. ʒij.; cretæ, ʒss.; ammon. hydrosulph. gr. xv. M. to be applied daily; every second day the vinegar to be used. Dr. Willan distrusts the efficacy of stimulating unguents, and forbids drastic purges but recommends, in some instances, liq. am. ac. dilut. as a wash, and also oxygen. muriat. acid, gtt. xij. ad xx. twice a day. Vin. colchi. gtt. xx. ad xxx. thrice a day for two or three weeks has been beneficial. In every case without inflammatory action, sulphurous fumigations at the lowest possible temperature may be employed. Belladonna lotion has been beneficial in many cases. This disease will frequently degenerate into contagious scabies, and sometimes into impetigo or ecthyma, from neglecting to remove sordes from the skin.

Crusta Lactea. *Lactumen.—Porrigo lactea.—Porrigo larvalis.—Teigne muqueuse.* Mr. D. thinks this disease is a degeneration of the vesicles accompaying strophulus, produced by the irritation of deteriorated milk, or of dentition, and separates it from the varieties of contagious porrigo. From the cause above stated, the vesicles of a straw-coloured tinge, often coalesce and become surrounded by an erythematous blush. On the bursting of the vesicles a viscid fluid is discharged, which becoming inspissated forms crusts of a whitish light-yellow, or greenish tinge, lying in laminæ, some overlapping others or intersected by narrow pinkish or olive-coloured fissures.

Treatment.—In the mild form, a change of breast milk, and the mildest laxatives, as hyd. sub-mur. gr. ss. pulv. rhæi. gr. ij. pot. sulph. gr. iv. &c. succeeded by an alterative of hyd. cum creta, gr. ij. ad v., carb. magnes. gr. ij. o. n. or sodæ carb. gr. iij. lac. sulph. gr. iv. may be continued for four or five days, and after an interval of three or four more renewed. If the abdomen is tumid, or the evacuations continue unhealthy, a decided purgative should be employed, or the laxative more frequently repeated. If the general health has suffered, and debility ensue, carb. ferri. and cascarilla should be used. The local applications should be tepid water or thin gruel, and the ungt. plumbi or lotio plumbi to the excoriated edges. When inflammation subsides, the ungt. hydr. nit. mit. or ungt. zinci. or ungt. ceruss. acet. and ungt. hydr. nit. mit. āā. may be used. If the crusts are dry, use a little cream, or ol. amygdalæ with a few drops of liq. potass. and if too moist, lac sulphur and hair powder combined may be sprinkled on them.

Follicular Tumours. *Crinones.—Follicular wart.—Acne simplex and punctata.—Sycosis capillitii.* These may be the result of negligence in cleansing the skin, but in most cases they arise from a deranged state of the digestive organs. *Crinones* or grubs, where the sebaceous matter is in excess, sometimes cover the backs of infants with whitish elevations.

Cure. Rub the part night and morning by the fire with a coarse cloth dipped in warm water, and administer a gentle laxative.

Follicular wart. A follicular tumefaction usually occurring in children from

two to six; differing from acne, being white and more elevated, seldom in groups, though two may sometimes coalesce. After remaining for some time stationary, if the digestive organs are deranged by errors in diet, the previously quiescent tumour will suddenly increase and suppurate.

Cure. The tumour should be excised by means of a dissecting forceps and scissors.

Acne simplex.—Punctata, can scarcely be called a disease of children.

Sycosis capillitii, is an obstruction of the follicles on the hairy scalp in children. The incipient tumours occur in clusters surrounded by a light vermilion blush, usually suppurate in eight or ten days; the ulcerated surface assuming the appearance of the pulp of a fig, (whence the name,) discharging a rancid smelling ichor.

Cure. If the inflammation is high, use the liq. plumb. subac. dilut. and a poultice, and when ulcerated, the poultice only when the inflammatory action has abated, ungt. hyd. nit. dilut. or lotio flava to the fungus. Internally, muriatic or sulphuric acid, with cascarilla and laxatives.

Urticaria. *Nettle Rash.* This is too well known to require description; Mr. D. offers nothing new in the treatment.

Impetigo. *Pustular, or Humid Tetter*, is non-contagious except in tropical climates, and "consists in an incrustation of the purulent discharge from those pustules, which have been denominated psydracia. These incipient psydracia appear either distinctly or irregularly scattered over an extended inflamed surface, or in clusters with a defined inflammatory blush surrounding them." When the pustules burst, the part becomes red and shining, and exhibits frequently a cribriform appearance. The discharge concretes into thin, brownish, yellow or olive-coloured crusts. The healing process begins usually in the centre and *radiates* towards the circumference.

Cure. If called early we may attempt to prevent the maturation of the pustule, by first removing the internal derangement of function, and touching it lightly with liq. plumbi or spt. rectif., or a drop of acet. aromat. on lint, or solut. argent. nitrat. In the inflammatory stage we should wash the part with tepid water, or a mild decoction of poppies, or apply a very thin bread poultice, and give an efficient purgative, and a mild laxative every morning with 8 or 10 grs. of potass. sulphas. or sulph. precip. grs. 10, twice a day. When inflammation is excessive, leeches or venesection may be resorted to. When inflammatory action subsides, and the disease assumes the chronic form, astringent lotions with alteratives or tonics may be used, such as solut. arg. nit. or lotio zinci. or lotio flava.

Sulphurous fumigation is here serviceable. A lotion of acid hydrocyanic, ʒüj. alcohol, ℥ss; aq. distillat. ℥viss; has been extolled by Dr. Thomson. Sea bathing is useful. A lotion of potass. sulph. ʒvj. aq. ros. vel distillat. ℔.ss. will sometimes allay the irritation in a few hours, though at first it is painful. It should be accompanied by the pil. hydr. gr.j. or ij. at night, and decoct. sarsa. ℥ss. or potass. sulphuret. ℈ss. twice a day. When debility is extreme, the decoct dulcamaræ—the vegetable and mineral acids, cascarilla and columbo may be added. The encrusted parts should be covered with oiled silk.

Herpes. *Shingles.* "Herpes phlyctenodes (zoster or zona) consists of an eruption of transparent vesicles of varied size from that of a millet seed to that of a pea." Usually preceded for two or three days, by some local tingling and

a pink blush, accompanied by febrile symptoms. The smaller vesicles occur in defined clusters, the larger often separate. It is not confined to any portion of the body, but its most usual location is the dorsal and abdominal integuments, which are peculiarly predisposed to the eruption of the larger vesicles of the zona, which not unfrequently encircle the body. There is one variety of this disease which affects the corners of the mouth, and may surround it entirely, (it is termed labialis.) When it affects the male or female organs of generation, it assumes corresponding names, as genitalis, &c. The more rare and beautiful *herpes iris*, so called from its peculiar form and variety of tints, is observed only in young people, and requires the simplest treatment.

Cure. To avoid the convulsions and other sequelæ produced by the mere irritation of the vesicles, they may be cauterized after the manner of Geoffroy and Lisfranc. On the establishment of the disease, mild laxatives and diaphoretics should be freely used. A calomel powder, of grs. v. and the effervescing draught with a warm atmosphere and light diet will comprehend the necessary general treatment. The local treatment consists of mild tepid ablutions, the ungt. cetacei. on a burnt rag, and defending the part from the irritation of clothing.

Herpes circinatus, or vesicular ring-worm differs entirely in its mode of treatment, from the above. "The lotio aluminosa, or decoct. gallæ, or the solut. of the metallic oxides being fully adequate to its removal in a few weeks." The bowels should be attended to.

Under his second division Mr. D. includes several diseases which we do not think properly belong to the class of cutaneous diseases. Among these are aphthæ, nomè, and œdema cellularis, we shall therefore wave the consideration of them.

Rupia—Ecthyma. In its incipient form, rupia consists of a broad, flattish vesicle; ecthyma, of the phlyzacious pustule, both terminating in circular imbedded incrustations.

Treatment.—In mild ecthyma lactantium the change of milk with a laxative will suffice. In children past weaning, more nutritive food with laxatives, and if there is much debility this draught twice or thrice a day, ℞. Tr. cascarilla. gtt. xij. Tr. Ferri. gtts. iv. aq. aurant. flor. ʒiij. M. The simplest local applications should be used as ungt. cetacei. In the superficial ulceration from acrimonious discharge with itching, the ungt. opiat. dilut. is serviceable. In ecthyma cachecticum and rupia escharotica, where there are gangrenous eschars, and deep sloughing ulcers, the tonic plan must be decidedly employed, the patient should be sent into the country or to the sea-side.

In addition to the usual tonics, pyroligneous acid in the following formula will be found to restore the tone of the stomach, ℞. aq. flor. aur., ʒij; ac. pyrolig., ʒj.; syrup. ʒj. M. coch. j. parv. ter die. Great advantage has been derived from chloruret of potass., gr. iv. ter die. Balsam of Peru in small doses will be usually of service. Minute opiates and warm bath to allay irritation. If mesenteric disease be present, mild mercurial alteratives may be used.

Pemphigus. This disease is not epidemic in England; affects children from three to seven years old. It commences with rigor, followed by the hot stage of fever, which continues four or five days, when the pulse sinks, pulsating 100 in the minute, the child becoming very languid. Soon after this, clear vesicles

appear, without much surrounding inflammation: as these enlarge and become bullæ, the contained fluid changes to a straw-colour, the pulse sinks lower, prostration ensues, and the fever assumes the type of typhus mitior. If the case is irremediable, the child dies in five or six days from the eruption. The vesicles on the thighs and arms will sometimes extend to the length of three or four inches.

Treatment. A judicious treatment of the premonitory symptoms will probably prevent the disease; and this may have often resulted from venesection, emetics, and laxatives. When the vesicles appear it is best to puncture them, and then apply a lotion of plumb. superac. or weak solut. of arg. nit. and the warm bath. To these should be added the use of hyd. cum cret. or quinin. sulph. or cascarilla and mur. acid, or tart. ferri.

Purpura, "consists of minute red points, termed *stigmata*, of small purple spots, or *petechiæ*, formed by the coalescence of the stigmata, or of larger patches of a dark crimson, or purple colour, *ecchymoses* or *vibices:* the proximate cause being a subcuticular extravasation of blood."

Treatment. If purpura *simplex* arises from deficiency of nutrient properties in the milk, the nurse should be changed, or a light nourishing diet given; a mild laxative every second day, and tonics, if diarrhœa should reduce the child, together with country air.

Purpura hæmorrhagica, has occasioned a conflict of opinion among pathologists, some referring it to increased vascular action and others to debility. Without the exhibition of laxatives, either bleeding or tonics will be inefficient. Indeed laxatives by removing obstructions to the absorption of nutriment prove the best tonics. The first and second purge should contain calomel to act on the hepatic system. Mercury should not be long continued in purpura, though some recommend it to ptyalism. The best laxative is sub. carb. sod. with pulv. rhæi. If the indications of local congestion are present, diaphoretics and diuretics should be used. Blood must be abstracted cautiously "if it be resorted to, it must be in minute quantity." On the removal of local pain use tonics, combined with occasional laxatives, avoiding the use of direct stimuli. Even during the tonic plan very minute bleedings have been salutary in cases of the asthenic form.

Ichthyosis. *Fish-skin disease* results from a chronic inflammation of the cutaneous vessels, by which a peculiar deposition of diseased cuticle is effected. The morbid laminæ are not deciduous. In the incipient stage the disease appears like a simple discolouration or cloudiness. As the disease advances, the laminæ are elevated above the surface of the healthy cuticle, assuming a dirty yellow or dusky hue. In children they become rarely of a horny or tubercular character, but are of a dusky or grayish colour, and flat, having fissures of a darker colour, imparting a sensation resembling a coarse, dull file.

Treatment.—In the incipient stage the employment of moderate friction may succeed in arresting it. In the subsequent stages the squamæ may be removed by picking them off, and using the warm bath constantly; this is often successful in preventing a return; sulphurous fumigation will expedite this result. The nitro-muriatic bath renders the detachment of the scales more easy. Sudorifics or tonics should be administered. If the system is much debilitated, a laxative followed by solut. arsenic is of service. Pilula picis Dr. Bateman extols highly.

Chloasma. *Ephelis.—Maculæ hepaticæ.—Ephelide hepatique.—Leberflecte.* Is a symptomatic discolouration, often assimilating to the local stain lentigines, or sun spots, situated in the corium, appearing about the breast and arms interspersed with portions of skin of a natural hue; sometimes after a period becoming of a lighter colour than it was at first. It differs from freckles in its more irregular and indented margin, its wider extent, and occurring on parts defended from the sun. It is sometimes attended with a pricking sensation.

Cure.—Saline purgatives are most efficacious when the stain is recent, and mineral and vegetable acids with tonics when chronic, together with some stimulating lotion, as acet. acetosum.

Under the third division the first that presents is—

Roseola. *Rose-rash.* "An efflorescence of a rose, or bright crimson colour, symptomatic of derangement in the visceral functions, or of dentition, or accompanying acute febrile diseases."

R. infantilis is a bright rose-coloured eruption incident to infancy, disposed in patches on a light blush-coloured surface, or diffused, assuming the serpentine or semilunar form, (like rubeola,) and is often transitory. The chief cause is the irritation of dentition.

Treatment.—A laxative every, or every second morning, with alteratives, and free incision of the swollen gums, comprises the treatment.

R. æstiva, and *R. autumnalis.* The first intimately resembling rubeola sine catarrho, occur in the hotter months. Swallowing cold liquids by a child heated with exercise will occasionally produce serpentine, and circular patches of a dull crimson; this is *R. æstiva.* The *R. autumnalis* arises from the same causes, but appears in circular or oval spots, of a lake colour of different shades. A mild emetic, laxatives, sudorifics, and light food, constitute the treatment essential for these eruptions."

R. vaccinia and *variolosa* are treated of under the heads of their associated diseases.

Erythema. A diffused redness of the skin, marked by, or accompanying various degrees of excitement.

E. simplex consists of patches of dull crimson, irregularly spread over the surface, usually on the face, breast, and arms. It occurs sometimes in cases of slight diarrhœa, or from the accession of pain during dentition, or from certain kinds of food, as arrow-root; when it arises from derangement of the primæ viæ it is mostly evanescent, (*E. fugax.*) Sometimes it is combined with œdematous swellings, (*E. leve.*) Occasionally the efflorescence is observed interspersed with distinct papulæ, (*E. papulatum.*)

Treatment.—Gentle laxatives and mild tonics, as inf. aurant, &c. will be all sufficient, recollecting that if its origin is referrible to any decided disease, it should be treated accordingly.

E. nodosum is of rare occurrence in children. It consists of large rose-coloured oval patches on the anterior part of the leg, acutely painful, which fade, becoming dusky in about a week. Sometimes it consists of rose-coloured tubercular lumps thickly strewed over the leg or arm with surrounding efflorescence.

Eczema. An eruption of small, pearly, or brownish vesicles, closely crowded, with little surrounding inflammation, and no decided febrile symptoms;

non-contagious, and is excited by various causes, as the heat of the sun, (*E. solare,*) or lytta, tart. ant., cachew oil, or mercury; or by internal irritation, or from drinking draughts of cold water, or acid, or sub-acid fruits eaten in the heat of summer.

Treatment.—This is simple, consisting of mild laxatives, with infus. cascarilla, or columbo, and ac. sulph. dilut. or other vegetable tonic. Underwood recommends the juice of sium aquaticum, coch. j.; ad v. given in new milk. The local applications should be tepid water, bread poultice, or strained gruel. If there is much ulceration the ungt. plumbi dil. or ungt. cetacei, and a little pulv. opii may be used.

Pityriasis consists of progressive exfoliations of thin scales, unattended by a fluid discharge, is non-contagious, and arises from chronic inflammation affecting the cuticle.

P. capitis, or dandriff, is to be removed by simple ablution; when the laminæ become a hardened crustaceous mass, (*P. scabida,*) the hair should be cut closely after the crust has been softened by tepid ablution, or warm poultices, and a cathartic given.

On the breasts of children of ten or twelve years old, there are sometimes light brown scales attended with itching, (*P. versicolor,*) and the discolouration is variegated. It may be checked by an alkaline liniment, composed of liq. potass. ʒij.; aq. rose, ℔ss. In case of present debility, decoct. sarsæ. and sulph. acid should be given.

Psoriasis. *Scaly Tetter.* It is non-contagious, occurring in irregularly circumscribed scaly patches, of a red or brownish colour, interspersed with fissures. These patches are of various sizes. The disease is accompanied by intense itching and heat, increased by elevation of temperature or friction, which sometimes produces deep ulceration, from which purulent fluid is secreted, which concretes with the small furfuraceous laminæ detached from the scales, and produces a more elevated crust.

Treatment.—In the early stage the bowels should be kept freely opened, and the lightest form of diet used; the diseased skin preserved by light covering from mechanical irritants, and rest enjoined. For allaying constitutional irritation, a draught of mist. camph. and spt. æth. nitric may be given twice a day; and a small dose of ext. hyosciami at night. In psoriasis of a dry description, much benefit is derived from v., x., or xij. drops of ac. sulph. dil. twice a day, with sago and broths. In the incipient stage, tepid water, or a very light and moist bread poultice, frequently applied, or warm vapour bath is all sufficient. The disease is often aggravated even by liq. plumb. subac. dilut., though much benefit may be derived from the cream or oil of almonds. A laxative should be given invariably every second day, leeches applied round the edges of the scales, and if the pulse is very full, venesection should be practiced. To relieve local irritation, use fomentations of belladonna, watching, however, its effects, as coma, delirium, and dark purple inflammation of the fauces, have occasionally resulted. When the inflammatory symptoms abate, sulphur fumigations may be used, combined with the arsenical solution; and the following:—℞. sulph. precip., ʒss.; potass. supertart., ʒj.; P. jalap, ʒss.; ft. pulv. 18; cap. j., bis in dies—aq. picis, ℔ss. x. omni mane. To these add cinchona if debility supervenes. Solutions of the alkaline sulphurets have been found ef-

ficacious; and decoct. dulcamaræ, with alteratives and change of air, has been successful in a case of two years standing. Much benefit has resulted from the pill. hyd. sub. c. Lotio flava is often very beneficial in the second stage, when the scales have been detached by the liq. potass, or acid muriat. In this state if the skin is pale, use the ungt. hyd. nitr. mit. Psoriasis of the lips, especially that tumid and fissured state of the lower lip, always indicates chronic inflammation or irritation of the viscera: leeches on the abdomen will often cure this when local remedies and purges have failed.

Porrigo. "A contagious pustular disease terminating in incrustation."

Porrigo favosa, (syn. Tinea capitis—Tinea favosa—Scabies capitis favosa—Teigne faveuse, scald head,) "is marked by the eruption of favi;" large, flat, light yellow pustules, occurring on all parts of the skin, but mostly about the ears, the occiput, mouth, and forehead, attended with considerable irritation, but no fever. The favi soon become confluent, and breaking, pour out a very glutinous purulent secretion, which concretes into yellow, olive-coloured, or brown crusts.

The *treatment* consists in mild cases in a purgative, succeeded by a mild laxative every morning, and sponging with tepid water, and a poultice to the sore surface to remove the scabs. The effect of laxatives frequently is to check the eruption, and prevent a fresh crop, which is aided by the addition of alteratives, as hyd. cum. soda, hyd. oxyd. nigr. in children of a gross habit; and where there is a strumous diathesis by mineral acids, solut. tart. of iron, the mur. barytes, or the alkaline chlorurets, especially the chloruret of soda. When inflammatory action subsides, if healing is not in progress, we may use ungt. picis, p. j.; ungt. sulph., p. ij. The French use with antiphlogistics, cataplasms and blisters to the arm. In very stubborn cases, equal parts of nitric acid, oil, and water, will be very efficacious.

Porrigo scutulata, (Ring-worm of the scalp—Pustular ring-worm,) consists of patches of yellow achores, detached, often remote, situated chiefly on the scalp, or other parts covered by capilluli.

Treatment.—The same constitutional means are to be resorted to as in the favosa. The local means are tepid ablution, poultices, and gently to detach and remove the destroyed hairs. When inflammation has been thus allayed, astringents, as sulph. cupri in solution or powder, the infusion of galls, the solut. of chloruret of soda, or deuto-ioduret of mercury with æther, may be applied, or the lotio arg. nitrat. The calx. hydrarg. alb. may be cautiously used to destroy the diseased glands. The following is used in Paris:—℞. j. sod. alicant, ʒiij.; potass. sulph. ʒiij.; lard, ℥iij. M. used daily after poulticing. The decoc. tabacæ has succeeded after other means have failed; it requires caution. Professor Hamilton's plan during the early stages, is to apply warm vinegar every night, followed by friction, with u. hyd. nit. mit. which was mostly successful.

When the scabs are dry, use liq. potass. or dilute nitric acid to soften them, then a poultice, and lastly, the inf. gallæ to restore the tone of the part. To detrude the hairs, apply three or four times the pulv. hellebori. alb. and ungt. picis, lukewarm: covering the head with an oil-skin cap, the loose hairs may after these applications be easily extracted. If the skin remain indurated, rub in ungt. hyd. and sulph. precip. p. æq. or wash with alcohol twice or thrice a day.

Paronychia, and Onychia maligna, are more properly in place in surgical treatises; we shall therefore pass them, and say for the same reason but a few words respecting *Pterygion, Fleshy caruncle,* or the *Fungous excrescence* vulgarly termed "growth of the nail into the flesh." Mr. D. after describing several approved methods of relief, gives a decided preference to the method of Mr. Durlachre. "It consists in cautiously cutting through the nail, with a very small knife, and without dividing or wounding the cuticle interposed between its under surface, and the sensative structure beneath it; then with a minute pair of forceps, raising and detaching the nail." This mode gives little or no pain, and having practised it, we can testify to its superiority over every other method we have tried.

Erysipelas, *St. Anthony's Fire,* "is a diffused and irregularly circumscribed inflammation, of a somewhat shining appearance, frequently characterised by vesication." Mr. D. considers it under the heads of atonic and acute. As our limits do not permit us to condense the substance of his remarks on these two forms, into the space of a few lines; nor to give interest in so brief a view to a subject on which elaborate essays have been written, we shall proceed to the consideration of those diseases which follow.

Lepra, *Leprosy,* is defined "a deposition of dusky or whitish scales, usually assuming in *Lepra vulgaris* nearly a circular form. These circles are marked by fissures of a light olive colour, and are surrounding a central space, which, as well as the external margin, is of a rose-coloured inflammatory blush. The edges of these squamæ are slightly elevated, the circle being seldom complete, but broken by one or two wide, red fissures."

Lepra alphoides is a disease of much milder character, the scales being thinner, smaller, and of a more pearly hue. Seldom assuming an annular form; spreading longitudinally.

Treatment.—In the incipient stage enjoin a regulated diet and laxatives. If the disease occurs during lactation, change the wet nurse. To relax the stiffness of the skin, use the warm bath, or cream, or bran and water. To detach the scales, use dilute alcohol or muriatic acid, or liq. potassæ, and give internally decoc. dulcamara, and potassæ sulphas, very freely. When exfoliation occurs, use ungt. hydr. nitrat. On the subsidence of inflammation, sulphur fumigation may be freely employed, or lotions of dilute sulphuric acid. To aid in restoring tone to the relaxed vessels, benefit will result from the decoc. dulcamar. the solut. min. or ferri tart. or decoc. sarsæ.

Artificial Harrowgate water, made of sodæ mur. ℔ij. mag. sulph. ℥iij. potass. sulphuret. ℔j. aq. cong. 34, bull. ad. 98°, is a valuable bath, in which the child may be immersed thrice in a week.

In stubborn cases, a regular mercurial course is to be adopted.

Miliaria, *Suette miliaire,* is an eruption of minute pearl-coloured vesicles, surrounded by a very faint pink margin, and sometimes by a rose-coloured efflorescence, *(Roseola miliaris.)* We should employ a decidedly cooling treatment, adapting at the same time those internal antiphlogistic remedies which may correspond with the peculiar concomitant type of fever.

Pompholyx consists of transparent bladders, from the size of a swan-shot to that of a filbert; commencing with small papulæ, speedily becoming whitish, like the wheals of urticaria, and subsequently filled with transparent fluid imparting a cerulean hue to them, which in two or three days is tinged with yel-

low, and is soon discharged. The cuticle heals spontaneously if preserved from friction.

Pruriginous papulæ are often interspersed among the bullæ, (*Pomph. pruriginosus.*)

The *treatment* consists in the use of laxatives, with light poultices to the ulcerations, or fomentations with liq. plumb. if there is inflammation; and of vin. opii dilut. if there is pruriginous irritation.

We come now to Mr. D.'s fourth division "Diseases consequent to Specific Infection." These are rubeola, scarlatina, varicellæ, vaccinia, variola, *pestis* and *syphilitic eruptions*, we do not think the two last can be properly included. It comprises an order of diseases, which, from their greater importance, have been more studied and are better understood than most other diseases of the skin. Some of them are still the subjects of ingenious and elaborate research.

As we cannot do justice to their importance in the narrow limits of a review, we shall content ourselves with a bare description of the eruption or efflorescence.

Rubeola. *Rubeole.—Morbilli.—Measles.* On the fourth or fifth day, (of the fever,) the skin appears covered with small red spots, very slightly raised, which coalesce and form red patches of various shapes; some are circular and annular, others like extensive papulæ, but the greater part assuming the form of a crescent.

Scarlatina, *Scarlet fever*, consists of a diffused efflorescence, of a bright pink or scarlet hue. In the *simplex* it appears on the neck and face in pink spots, speedily coalescing in two or three days to one diffused efflorescence, which has not the crescentic form or light crimson hue of measles. Papulæ are often, and vesicles sometimes present.

Varicella. *Variola pusillæ.—Bastard-pock.—Chicken-pock, &c.* In the mild form of this disease, it consists of vesicles which are scattered, having a very faint pink hue around them. In the more aggravated forms, they approach to the character of variolous pustules. The eruption generally appears first on the breast: on the day subsequent to the appearance of the small incipient papula, it assumes a distinct vesicular character in the centre; these enlarge and are sometimes filled with a yellow purulent fluid about the fourth day, when they begin to subside, are flaccid at the edge, and on the fifth day brown-yellow crusts are formed.

Vaccinia. *Kine-pock, &c.* When the lymph is successfully inserted, after the lapse of forty or fifty hours a small red spot appears; about the fifth day, the papula having continued to increase, a small pearly visicle is perceived; on the seventh or eighth day, a slight depression is visible on it, and a more distinct annular form and a pink or rose-coloured ring is apparent. An elevated border is formed at the edge of the vesicle, consisting of a number of small vesiculæ, usually in distinct cells. On the ninth day the rosy blush has spread, and attains its height on the tenth.

Variola. *Small-pox, &c.* On the third or fourth day of the eruptive fever, small papular spots appear, first on the face and then on the breast; on their appearance the fever remits, and mostly subsides on the fifth or sixth day; when the papula vesicates and becomes slightly depressed in the centre, a light red margin is perceived around it, and a fainter blush more diffused. On the eighth

day, the eruption becomes decidedly pustular, and "on the tenth day the disease may be termed at its acme." Of the *varioloid pustule* we do not feel authorised to attempt a description, as it admits of such a variety of appearance, and the disease itself is now universally admitted to be small-pox modified.

The last division, consisting of "local diseases usually accompanied by little or no constitutional derangement," comprises a few affections of comparatively little importance, as *Clavis*, (corn,) *Verruca*, (wart,) *Lentigo*, (freckles,) *Pernio*, *&c.* of which we shall take no further notice. There is, however, one among this order which is worthy of more consideration. It is

Scabies, *Psora*, *Le gale*, or *Itch*, which is divided into three species, the *S. papuliformis*, the *S. lymphatica*, and the *S. purulenta*.

The first, the pimply or rank itch, is an eruption of minute papuliform vesicles, preceded and accompanied by itching which becomes more intense as the vesicle is developed, and is aggravated by elevation of temperature. "It usually occurs first in the flexures of the joints, or on the breast. Among these minute vesiculæ, are often interspersed both vesicles of a larger size, and even phlyzacious pustules." The abrasion of the vesicles results in small blackish spots, which sprinkle the skin, and the frequent scratching produces numerous red parallel lines in clusters.

The lymphatica, or watery itch, closely resembles eczema solare, and herpes phlyctenodes. It is an eruption of large transparent vesicles, with little surrounding inflammation. They occur almost exclusively about the flexures of the joints, accompanied by severe itching.

Many of the vesicles burst in a short time, and form a small brown crust. Others become pustular, surrounded by a deeper and more extensive blush, and soon terminate in ulceration and consequent incrustation.

The *S. purulenta*, or pocky itch, "consists of large lemon-coloured pustules, usually occurring on the back of the hand, between the forefinger and thumb, on the feet, on the arms and legs, and in neglected cases, extending even to the fossa of the nates."

They are marked by an extensive blush of an inflammatory character. Sometimes the pustules coalesce, ulcerate, and are subsequently covered by a firmly-adhering, dark-brown scab.

Treatment.—The most generally efficacious remedy is sulphur, which indeed is the basis of the major part of the formulæ in use. In mild cases, particularly of *Scabies lymphatica*, the internal use of sulph. precipitat. will often effect a cure. In the more severe forms, the local application of this mineral, in the form of ointment, lotion, or fumigation, is essential, and may be combined with its internal use.

A number of formulæ are given by Mr. D. which we do not think it requisite to transcribe. Tonics are proper in cachectic cases.

Before we take our leave of Mr. D. we may remark in relation to the literary execution of his work, that he has fallen into several puerilities and affected modes of expression, which do not add to its perspicuity or beauty, and his not unfrequent *quotations* from ancient and modern poets and authors, (which almost invariably have a tendency to enervate the style, especially of a work professedly scientific,) forcibly reminded us of the passage, "he has been to a feast of languages, and stolen all the scraps." C. B. M.

XXII. *Traité de Petite Chirurgie.* Par M. Bougery, M. D. Octavo, pp. 520. Paris. Rouen frères, 1829.

The title of this book, when put into the English language, (Small Surgery,) has to the greater number of readers so equivocal a meaning, that only a few would conjecture what is actually meant by it. Perhaps we should find more euphony, and what may seem a more scientific and expressive version by translating it Minor Surgery. In point of fact, the minor or more subordinate parts of surgery are its only objects; such things indeed as one would be tempted to call *common place*, and yet which, when they are to be executed, the young practitioner is apt to do so clumsily, that he is astonished frequently at his own inexpertness and ignorance, and is disposed to wonder how he could have been admitted into the profession of medicine, without a familiar acquaintance with them. Daily experience proves that such common place things, form the distinction between the practical and the speculative physician, and that simple and extremely accessible processes, are frequently much more effectual than the more complicated and researched. For example, what can be more readily obtained than the materials for a bread and milk poultice, what can be more useful, or more frequently resorted to, yet how few persons are there who can make it well, and how often does the application fail from its faulty preparation? Should the young physician be called upon to prepare his own poultice, he is apt to be placed in a lamentable predicament, from being without experience, and what is worse, without a book which contains the desired information; for it will be observed, that some of our dispensatories and formularies which are most used, have omitted the article poultice entirely, and with it also almost the whole tribe of cataplasms, fomentations, gargarisms, baths, fumigations, and injections, as if they did not belong to the regular and daily practice of physic, and were unworthy of the physician's notice.

Mr. Bougery, perceiving a deficiency on these and other elementary points, in the regular treatises on surgery, has undertaken to supply it, and to do him justice, he has accomplished this in a manner highly satisfactory and instructive; and like one who has a perfect familiarity with all the most useful details of hospital and private practice. He makes a frank acknowledgement, that with the exception of a few things, he has no pretension to originality, and is indebted to the clinical instructions he has received, and to some of the best works on surgery, especially those of Lafaye, Boyer, Sabatier, and Samuel Cooper.

Being from personal experience acquainted with the wants and resources of country practitioners, he has taken care to indicate such modes of management as are best adapted to their convenience. In this we think he has shown sufficient sagacity, as nothing can be more fruitless to the mass of the profession in the country, than a recommendation of articles and of apparatus, to the use and fabrication of which, neither the circumstances of their patients, nor the general state of the mechanical arts in the neighbourhood, are competent.

The Traité de Petite Chirurgie of Mr. Bougery does not present a regular classification of its subjects, from the difficulty of putting them into that shape, yet it is upon the whole methodical enough, and well arranged. It is distributed under several distinct heads, each of which is a treatise in itself, comprising

several subordinate matters. These heads are—Dressings after operations and accidents;—topical medicaments, consisting in cataplasms, fomentations, baths, gargarisms, dashes, (douches,) injections, fumigations, liniments, embrocations, cerates, ointments, plasters;—bandages of every variety;—trusses;—artificial ulcerations, as blisters;—issues, setons, cauteries;—simple operations, as bleeding, cupping, leeching, vaccination, catherism, reduction of hernia;—wounds;—ulcers;—abscesses;—hæmorrhages.

We have risen from a hasty inspection of this work with impressions entirely in favour of it; it certainly must be a great acquisition to any medical library, and we earnestly hope, that for the benefit of persons not acquainted with French, an English version may be prepared. W. E. H.

XXIII. *Hints for Examination of Medical Witnesses.* By JOHN GORDON SMITH, M. D. &c. Professor of Medical Jurisprudence in the University of London. London, 1829, pp. 138, 12mo.

Few writers have been more zealous in the prosecution of their enquiries, or more indefatigable in their exertions to promote a general diffusion of their favourite branch of study, than the author of this small treatise. Until the appearance of Dr. Smith's Principles of Forensic medicine, there was no work in the English language exclusively devoted to medical jurisprudence; some few tracts it is true appeared at intervals, which, however valuable in themselves, were rather sketches of the numerous subjects embraced by that science, than works to which the physician and jurist could refer with confidence.

Dr. Smith observes that he has ventured on the present publication, from having heard complaints of the inconvenient size of his former works. It is addressed exclusively to the legal profession, and is calculated to afford them great assistance in their examinations, but, as is very justly observed by the author, it is by no means suited for medical men, who must extend their researches far beyond such narrow limits. It is the business of a medical witness to instruct the court and jury in the most minute particulars, on every point connected with his profession, which have a bearing on the subject under investigation, and hence his knowledge must be extensive and diversified. To the lawyer, however, little more is requisite, than such a general knowledge as will enable him to conduct an examination without harassing himself and a witness by a host of questions wholly irrelevant to the case.

The work is divided into two parts, the first including those topics which present themselves in the form of criminal process, and the second those of a civil nature; in the latter, however, are introduced some which oftentimes come under the cognizance of both; thus the proofs of lunacy may be equally important in each of them. In the first section, Dr. Smith includes homicide, infanticide, abortion, and rape.

Homicide he says may with tolerable accuracy be referred to one of the three following causes, viz.; poisoning, suffocation, wounds, and other mechanical violence. As our limits will not permit us to analyze either of these, or the other points treated of by Dr. Smith, we shall merely notice such directions and advice as appear new and important.

Whilst giving a very clear and lucid account of the effects of arsenic, and

the modes of verifying the presence of this substance in the stomach and bowels, Dr. Smith observes that, symptoms, morbid appearances, and antidotes, can hold but a subordinate rank in the scale of proofs for judiciary satisfaction. We fully agree with our author, that too much has been written on the subject of the detection of arsenic; in fact too much has been attempted and too much importance attached to certain processes, which are but steps towards a conclusive verification. No *medical* proof of poisoning by arsenic ought to be received as evidence in a court of justice, short of the reduction of the metal, and we will even go further; the evidence of a medical man who has not previously made experiments on the detection of this and other analogous poisons, ought to be received with extreme caution, if not wholly disregarded.

In speaking of vegetable poisons, Dr. Smith remarks, that for their detection certain accessory properties and characteristics must be taken into account, and a practitioner ought to be able to detect them in every instance by means of their botanical characters when presented to notice in an unprepared form, or by their sensible properties when in the forms it is customary to see them reduced to in the hands of the druggist. Such should certainly be the case, but we are much afraid from the little attention paid by our medical men to medical botany and pharmacy, that they would find themselves wofully deficient in the knowledge necessary for such investigations.

In wounds or mechanical injuries, the intent with which they were inflicted is always considered by the court, and hence justice hardly requires medical assistance, except as to their description. Formerly the time during which a man was responsible for any violence he may have committed on the body of another, was limited, as is well known, to three hundred and sixty-six days, but this is now properly done away with. A medical practitioner, should always be able to explain when wounds may in appearance prove fatal, while the real cause of death is different; and it may often be highly important to ascertain how far wounds may be modified or aggravated by the state of health, and constitutional peculiarities of the parties sustaining them, by the treatment applied, and by other circumstances which may influence their event and termination. Thus, for instance, a blow in the groin may be a very slight matter in itself, and incapable of doing injury to a majority of persons, but if the party should happen to be afflicted with hernia, serious consequences may result. The issue is also greatly influenced by professional treatment, for by inattentive or unskilful conduct, the medical attendant may literally become an accessory.

On the perplexing subject of infanticide, our author has offered nothing new. He is of opinion that the facts to be deduced from the state of the lungs, deserves more credit and attention than it has of late been usual to accord it. In a former number of this work we have examined this subject at some length, and shown that there is scarcely any one proof or experiment, which of itself affords sufficient grounds for making up a positive opinion, but that when several are resorted to, very little uncertainty should exist. We are glad to see that our author is anxious in his directions to give the unfortunate woman every chance, that a regard for justice will allow. We are fully persuaded, that few cases of deliberate child murder have ever occurred, in which the parent was

not in a state of partial insanity; most of them, indeed, may, on close investigation, be traced rather to inattention and a desire to conceal the consequences of an illegitimate pregnancy, than to any moral intention of a criminal nature.

In treating of rape Dr. Smith makes the following just remarks:—"With few exceptions, it may be said that the mere gratification of lust is rarely the impulse to the commission of this crime; or when so, probably the female herself has been to blame in encouraging or promoting its excitement. In fact it may be universally assumed, that a female cannot be violated in the true sense of the word, unless her powers of resistance be completely overcome. The evidence of medical men is rarely required in these cases, except where the injured party has been a child, as the solemn oath of the female, as to the particular nature of the assault, is the principal article of evidence."

In the second section of his work, or those cases which come under the jurisdiction of civil courts, Dr. Smith includes—mental alienation, mala praxis in medicine and surgery, survivorship, personal identity, duration and signs of pregnancy, life insurance, and feigned or imputed diseases.

Mental disorders are never precisely identical in any two cases, and hence no fixed and certain rules can be definitively laid down for their detection, though there are generally well-established and conclusive indications of the existence of such derangement applicable to, and discoverable, in every instance. By a madman, in the popular, and even legal sense of the word, is to be understood, says our author, "a person whose conduct is not under the control of his judgment, or whose judgment misdirects his deportment." It often happens that individuals may be perfectly insane on one or more subjects, and display superior correctness and propriety of thinking, speaking, and acting on all others. Here it is extremely difficult for a medical man, who has not been in the habits of constant intercourse with them, to detect the existence of the disorder. The evidence must in such cases be mainly derived from non-professional persons intimately acquainted with the habits and manners of the party or parties.

"In all the states of mania, however, there are certain symptoms, or physical signs, by which an intelligent practitioner will be correctly guided. He cannot erect an ideot into a man of talent; he cannot have many opportunities of observing a lunatic without finding out the lamentable distortion in that person's constitution; nor can he go far in his intercourse with the melancholic madman till he detects the force and nature of his malady; the maniac, in the full sense of the word, commonly gives little scope for the exercise of ingenuity in the development of his case; and of delirium every old nurse is a competent judge."

On mala praxis our author makes some short, but pertinent remarks, though we are sorry to see in this instance, as in some others in the work, an attempt at wit, which, to say the least of it, is out of place in a volume dedicated to such vitally important subjects: we regret to be obliged to make this observation, as we fully feel the extreme utility of Dr. Smith's labours, and duly appreciate the value of his exertions in the cause of science and justice.

Survivorship. This is a question which involves the descent of property, and may require the testimony of medical witnesses to elucidate, but unfortu-

nately our profession seldom study such matters, and but too often in this and analogous cases, display less intelligence and acumen than the general body of their fellow citizens.

Personal identity. In these cases at first view it would be said that all persons were capable of deciding, since it may be laid down as a general proposition, that no two individuals of the human species are precisely alike; but in order to verify the dissimilarity, it may be necessary to carry the investigation beyond superficial and obvious characteristics.

Pregnancy. We are every day presented with examples of the importance of a proper knowledge of this subject, and our tribunals are often occupied with the investigation of points connected with this state. No practitioner can possibly in the present state of knowledge err in deciding as to whether a woman is pregnant or not, especially after the first three or four months, and the physician who mistakes the pregnant for any other state, forfeits all claim to confidence in his judgment and acumen.

As to the duration of pregnancy, Dr. Smith is very decided in his opinion, we shall extract what he says on the subject, as this point has very lately been the ground of a criminal prosecution in this city. "Beyond nine months there has been great difference of opinion as to the truth of the matter; but the author has no sort of hesitation in declaring his conviction—that women do exceed the ordinary term of gestation; they certainly may carry a fœtus to the end of the eleventh, and even into the twelfth month. Further than this it is to be apprehended that evidence will be found deficient."

Feigned or imputed diseases. These seldom become subjects of legal discussion, and a knowledge of them is only useful to medical men attached to the military and naval services, or to those connected with hospitals and infirmaries. The only rule says our author, that can possibly be laid down must consist in warning all but medical men, that they must expect to go wrong if they undertake the development of the real state of the case.

As regards the points which Dr. Smith treats of under the head of ecclesiastical courts, we shall not attempt to notice them, such tribunals are unknown in this country, and when cases come before our civil tribunals they can be decided without the necessity of medical interference.

The last subject is the important one of medical evidence, a subject which has been and still is, an opprobrium medicorum. There is no situation in which a majority of physicians appear to so little advantage as in the characters of witnesses in a court of justice. We need not in this place advert to the reasons, they are but too evident, and until a proper knowledge of medical jurisprudence be considered as essential to the education of students in our profession, this evil must and will continue.

Dr. Smith very properly protests against lawyers considering what is ordinarily called experience, as entitled to greater credit than the knowledge possessed by a member of the profession, who though young may be a better authority than the mere man of experience. In the eye of the law one man of good character is as credible a witness as another, though in point of standing and of professional success there may be a difference.

In concluding these few observations and extracts from Dr. Smith's work, we will merely add that it is well calculated to be of extreme importance to legal

men, as affording them a ready guide in their examinations of witnesses, as to the nature of the questions which will be calculated to throw light on the subject. To the medical man it also has this advantage, that he will not be perplexed with questions to which no definite answer can be returned. For it is well known that it is infinitely more difficult to return clear and perspicuous replies to the interrogatories of one who is wholly ignorant of the subject matter, than to those of one who is competently skilled, in the same manner as an experienced fencer finds it more harassing to parry or repel the attack of one wholly ignorant of the use of the sword, than of one who possesses equal knowledge with himself.

We think a republication of this work, altered and remodelled to suit our courts with occasional references to decisions, would be an exceedingly important addition to every lawyers library. R. E. G.

XXIV. *A Manual of Materia Medica and Pharmacy, comprising a Concise Description of the Articles Used in Medicine; their Physical and Chemical Properties; the Botanical Characters of the Medicinal Plants; and the Formulæ for the Principal Officinal Preparations of the American, Parisian, London, Dublin, Edinburgh, &c. Pharmacopœiæ; with Observations on the Proper Mode of Combining and Administering Remedies.* By H. M. Edwards, M. D. and P. Vavasseur, M. D. Translated from the French, with numerous Additions and Corrections, and adapted to the Practice of Medicine and the Art of Pharmacy in the United States. By Joseph Toono, M. D. Member of the Philadelphia Medical Society, and E. Durand, Member of the Philadelphia College of Pharmacy. Philadelphia, 8vo. pp. 623.

Drs. Edwards and Vavasseur have displayed much skill and judgment in the preparation of this manual. Nothing new appears to be omitted, whilst the old materials have been carefully sifted, and the valuable portions alone retained. In effecting this operation, there has been little proscription even among the simples, a forbearance which we think commendable.

The professed aim of the authors was to prepare such a treatise as would prove useful to students and young practitioners, by presenting in as small a compass as possible all essential information relative to materia medica and pharmacy. This they have accomplished in a highly creditable manner, and that we are not singular in this opinion, is demonstrated by the speedy demand there has been for a new edition. It is this second edition which has furnished the text for the present translation. The authors state, that without having departed from their original plan, they have entirely re-written their manual, supplied several omissions, and rendered it otherwise much more complete. The little concord that subsists in the arrangements adopted by different writers of eminence, shows the contrariety of opinion that has subsisted in relation to the most proper mode of classifying the objects embraced in the materia medica. Neither is this point at all settled, in France at least, since in a late memoir upon the subject by M. Cap, an apothecary, of Lyons, though crowned by the Medical Society of Paris, the author comes to the conclusion, that, in the present state of medical science, it is impossible to form such a classification of remedial agents as would be found altogether perfect. The plan adopted by

Drs. Edwards and Vavasseur, it will be seen, is neither entirely original, nor, as they admit, free from imperfection. Believing that a knowledge of the most conspicuous primitive physiological changes effected on the whole or several parts of the system by the application of medical agents, furnishes the most rational basis for their arrangement, they have proceeded, as nearly in accordance with such a view as the present data permit, in making the following divisions:—

1st. *Caustics*, which, by a chemical action, produce disorganization in those parts of the body with which they come in contact.

2d. *Rubefacients* and *Epispastics*, which induce inflammation in the parts to which they are applied, without producing disorganization.

3d. *Astringents*, which, applied to the living tissues, produce a kind of fibrous constriction that is local.

4th. *Tonics*, which, by their general operation, tend to increase the energy of the organs.

5th. *Stimulants*, which excite the tissues of organs, and increase the activity and rapidity of their functions. This class they subdivide into—

General Stimulants, the action of which is determined through the whole system; and

Special Stimulants, the operation of which is restricted more particularly to one or more organs, as to the kidneys, skin, nerves, &c.

6th. *Narcotics* or *Soporifics*, which act specially upon the nervous system, tending to diminish its action essentially, or even to produce a momentary suspension of its functions.

7th. *Emetics*, which induce contraction in the stomach and abdominal muscles, and thus occasion vomiting.

8th. *Purgatives*, which produce a moderate and temporary irritation over the internal surface of the intestines, giving rise to alvine evacuations.

9th. *Laxatives*, which also produce alvine evacuations, but act rather as emollients than irritants.

10th. *Temperants*, which moderate the too great activity of organs, more especially the rapidity of the circulation.

11th. *Emollients*, which tend to soften the tissues with which they come in contact.

12th. *Anthelmintics*, which, without acting in a decided manner upon the general system, cause the death or evacuation of intestinal worms.

In the description of each medicine there is given—1st. The names under which it is most usually known, and particularly the popular, pharmaceutical, and scientific appellations, whether botanical or chemical. 2d. Its origin. 3d. When the substance is vegetable, the botanical characters of the plant furnishing it are also given: the names of the families to which the plants belong, as well as those which designate the medicinal substances derived from the mineral kingdom are, to prevent repetition, presented in synoptical tables at the close of the book. 4th. The physical properties, under which title is comprised a description of the state in which it is most frequently found in commerce. 5th. Its chemical qualities. 6th. The incompatible substances, or those with which it should never be united in a pharmaceutical preparation. 7th. Its preparation. 8th. Its mode of action on the system, and therapeutical employ-

ment. 9th. The doses in which it is administered, with the different modes of using it both externally and internally. The principal officinal preparations in which it enters as a component part, its composition and doses. Finally, some magistral formulæ for the purpose of exemplifying the manner in which it is prescribed.

What contributes to render this treatise particularly valuable, are the botanical and therapeutical contributions. Every one knows that botany is closely allied to medicine, but we have never found this alliance so forcibly exhibited as in the work before us. The student of materia medica, who might wish to enquire into the botanical characters of a plant, will find every thing furnished to his hand, without the trouble of searching into botanical treatises.

The pharmaceutical portion embraces a very great mass of information which has been judiciously extracted, and skilfully condensed from almost every respectable source. The history of each remedy is accompanied with the principal officinal preparations into which it enters as an essential ingredient, their composition, doses, &c. and so far is this carried as to include the different preparations, not only of the Paris, London, Edinburgh, and Dublin Dispensatories, but those also of Austria, Russia, Finland, Denmark, Prussia, Poland, Madrid, Holland, and even other European authorities; to all which the translators have judiciously added those of the United States. Most of the formulæ of Magendie, and those presented in Ratier's account of the Civil Hospitals of Paris, and those also of Guy's Hospital, London, will be found in this manual. It thus contains all the pharmaceutical information that the physician can desire, and in addition, a larger mass of information, in relation to the properties, &c. of the different articles and preparations employed in medicine, than any of the dispensatories, and we think will entirely supersede all these publications in the library of the *physician*.

We have thus attempted to convey some idea of the treatise under consideration, as it came from the hands of its authors, and we have spoken with the greater assurance from no short acquaintance with the original. It remains for us to say, that we believe the version has been very faithfully made, and the American translators are moreover entitled to praise for having added much valuable information relative to the medicinal preparations and plants which have been treated of by different writers on this side of the Atlantic; and in these additions they have succeeded well in following the method pursued in the original. G. E.

XXV. *De Hydrorrhea Uteri Gravidarum; commentatio inauguralis.* Auctore Joannes Baptista Geil. Heidelburg. 8vo. pp. 54.

The affection treated of in this dissertation, consists of a discharge of water from the gravid uterus, which is neither preceded nor followed by contractions, nor by dilatation of the orifice of the womb; disturbing utero-gestation very slightly or not at all, the woman going her full time, and always having the membranes distended in the usual manner during labour. Such discharges are rarer during the early stages of pregnancy, from the third even to the fifth or seventh month, and more common afterwards: the quantity of fluid is exceedingly variable, and sometimes an almost incredible discharge takes place. In

some instances this occurs at a sudden gush; in others the water dribbles away. The profluvium appears once or oftener, at different intervals, sometimes persisting for a long time, increased in quantity by violent excitement of body and mind, and the contrary; the quantity is sometimes greater at night than during the day. The cause of this condition is sometimes peculiar, and again is altogether undiscoverable. Some cases are preceded by no pain; others are preceded or followed by pains similar to those of labour. The fluid effused is generally yellowish, sometimes tinged with blood, and again perfectly limpid. In cases occurring near the full time, the fluid leaves rigid spots upon the clothes, and uniformly gives out that seminal odour peculiar to the proper fluids of the amnios.

Although this peculiar discharge has frequently been observed by very experienced men, it cannot be regarded as at all common; it might readily lead an inexperienced person to believe that abortion was about to occur, or that delivery must necessarily follow without delay. Yet it has happened that such discharges have occurred many days and weeks prior to delivery, and at the proper time the labour comes on, with properly distended membranes, as if no such effusion had taken place.

A great difference of opinion exists among accoucheurs concerning the source of these *false* or *spurious* waters, as they are called, to distinguish them from the waters within the fœtal membranes, whose displacement must necessarily be followed by parturition. Some think them to be contained between the amnion and chorion, and to flow from a rupture of the latter; others from a ruptured lymphatic, or a broken hydatid within the neck or body of the womb; others from a transudation of fluid through the amnion, &c. The opinion first mentioned, is the most generally received, because water is found between the chorion and amnion until the third month of pregnancy, and it is thought to be from its increase that such effusions arise. The writer objects to this mode of accounting for the fluid, that in various instances ova have been examined by himself and others, which had no inter-membranous fluid. But we can scarcely attribute much importance to such facts, inasmuch as these ova were thrown off by abortion before examination, and might readily lose any such fluid, either by transuding from the chorion, or by endosmosis passing into the amniotic fluid.

From a view of all the facts, the author concludes, that the discharge is from a fluid extravasated between the concave surface of the womb, and the external or convex surface of the chorion. When this collection increases to a certain degree, it escapes from the orifice of the womb, in a mass and force proportioned to the operation of the excitement of body or mind which determines it. A clear distinction between discharge of these spurious waters and those from the amnion, is to be derived from the period of their occurrence, the absence of parturient efforts, and undilated state of the mouth of the womb, as well as the slight, if at all perceptible, change in the abdominal tumour of the patient. Such discharges should cause no alarm to the patient, nor provoke any interference from the midwife.

The causes of this singular flux of water, whatever may be the immediate point at which it is secreted, are to be sought for in the general condition of the patient, her mode of life, habit of body, or the state of the bowels, womb,

and adjacent organs. Most commonly it is found to occur in females of rather robust and plethoric habit, in whom full diet and want of exercise determine the secretory irritation in an organ already under a powerful healthy excitement, and relief is readily obtained by reduction of diet and other antiphlogistic measures. The disease occurring in debilitated constitutions, will of course require an opposite course of treatment.

Dr. Geil has appended to his dissertation several well-observed cases of this affection, occurring in the experience of Professor Naegele, who has also furnished him with a collection of references to high authorities who have witnessed and recorded such instances. We have not room to insert these, nor the interesting cases, (transcribed from the Journal Général de Médecine,) of uterine dropsy complicated with pregnancy.

The style of this dissertation is idiomatically pure, and neatly appropriate to the subject; showing that the author has been a familiar reader of classic Latin, and thence imbibed the correct taste and adaptness of expression in composition, which is alone to be obtained by study of the most excellent models.

J. D. G.

XXVI. *Traité d'Hygiéne Appliquée à l'Education de la Jeunesse.* Par le Dr. Simon, (de Metz.) Paris. Rouen frères, 1829. pp. 444, octavo.

The circumstances which exert an influence upon the health of both infants and adults brought together, and subjected to similar agencies, have from time to time given origin to treatises, but we believe that there has not hitherto been one devoted specially to the hygiene of youth collected in places of instruction. It is this deficiency which Dr. Simon has endeavoured to supply, his observations being restricted to the term of life embraced between the seventh year and the age of adolescence. In practice at least, the moderns appear to have lost sight, for the most part, of the great importance of physical education, notwithstanding the primary consideration attached to it by the ancients. Every one, however, who attentively considers the intimate connexion subsisting between the moral and physical organization, must be sensible that a healthy condition of body adds to the capacities and energies of the mind, nevertheless there are many who have the superintendence of education, who are intent only upon cultivating the intellectual faculties, which we often find borne down by a multitude of studies pursued at the expense of the physical energies, a course frequently ending in the most melancholy results.

The object of the present treatise on hygiene is to point out the means of correcting these evils by the judicious application of such discipline as contributes to health and to vigour of constitution, and at the same time favours the active development of the intellectual faculties. The period of life to which the treatise of M. Simon principally refers, is that at which hereditary and other predispositions and vices can be most successfully combated, and the knowledge, therefore, of the proper means to be pursued at this period, is of extreme interest and importance. We may hereafter enter into a more particular consideration of the work; at present we shall restrict ourselves to enumerating the leading topics discussed by our author.

The work is divided into two parts. The first general division embraces, 1st, a consideration of the hygienic influences of the atmosphere; 2d, those influences which are adapted to weaken or favour the effects of atmospheric agents, as abode, dress, bathing; 3d, aliments and drinks; 4th, secretions and excretions; 5th, muscular movements or exercises, and the conditions of repose and sleep; 6th, sensations and the intellectual passions and functions; 7th, the means by which education exerts its influence, including habit, imitation, curiosity, emulation, rewards, encouragements, and punishments; 8th, the duties of the physician attached to institutions for education.

The second general division is devoted to the consideration of diseases most frequent in youth: 1st, those of the lymphatic system; 2d, those of the sanguineous system; 3d, those of the nervous system; 4th, affections of divers natures. Many other topics are treated at considerable length, and in general with much good sense.

The book is deserving the attention of those engaged in the education of youth, to whom it cannot fail to supply many valuable hints and much useful instruction; but the utility of the treatise, is not confined solely to those who have the charge of seminaries of learning; it embraces a full view of the physical education of youth, and may therefore be consulted by parents with advantage.

G. E.

XXVII. *Precis Physiologique sur les Courbures de la Colonne Vertébrale, ou Exposé des Moyens de Prévenir et de Corriger les Difformités de la Taille, Particulièrement chez les Jeunes filles, sans le secours des lits Méchanique a Extension.* Par. C. Lachaise, M. D. P. &c. &c. Avec six planches. Paris, Villeret & Co. 1827. pp. 200.

In Europe, as in this country, medical men are greatly divided in opinion as to the comparative merits of the two kinds of treatment of serpentine curvatures of the spine. While some depend almost exclusively on mechanical means, others denouncing them as highly detrimental, and altogether useless, resort as exclusively to measures corroborative of the general health of the body, and to exercises which strengthen either a part or the whole of the muscles of the spine and trunk. M. Lachaise, although disposed to favour the latter plan of treatment, occasionally adopts mechanical suspension. It cannot be doubted that he who avails himself of the resources of both parties, will soonest obtain, for his patients, that health, and beauty of figure, so desirable for those who are usually the subjects of lateral curvature.

M. Lachaise claims the merit of having, in a formal manner, stated the distinction between the two kinds of spinal curve. The first produced by an irregular action of the muscles; the second by an essential alteration of the parts which compose the vertebral column. The first class he divides into several species: the right cervico-dorsal curvature, the left cervico-dorsal, the lateral dorso-lumbar, the backward convex curve, and the hollow back, or anterior curve. Besides these he has also classified the cervical curves.

As his plan of treatment consists mainly in strengthening by varied exercises those muscles which, according to his views, yield to more potent antagonists, his subdivisions are useful for the direction of the treatment.

For the right cervico-dorsal curvature, he suggests the use of the winch, placed very high, and rendered somewhat difficult to move. A similar mode of treatment will, according to our author, efface the left cervico-dorsal curvature.

The lateral dorso-lumbar curve has been, by the most able writers, ascribed to the too great force of the muscles attached to the convex side of the curve; and they have of course recommended the promotion of the muscular energy on the concave side. On this point our author's views are original. He believes that this curve is produced by the muscles of its concave side, which draw down the chest towards the pelvis; and he, consequently, advises the corroboration of the muscles of the convex side. This he effects by causing a weight to be carried in the hand of the concave side, so as to produce a leaning to the opposite side.

When the back is convex he makes his patient walk down inclined planes; and when concave, the ascent is recommended. Curvatures of the neck are treated by M. Lachaise on similar principles, and, as he states, with much success.

Of the various forms of curvature, our author esteems the anterior the most rare, and the most difficult to cure.

We are not among those who believe that exercises alone, however well-devised, will correct any spinal deformity, and we therefore regret that our author has not appealed to cases authenticated by others, for the proof of the excellency of his plan; as nothing short of such facts, so confirmed, could shake our faith in the efficacy of another practice. In truth we believe that the spine becomes curved through bad posture during hours of muscular *rest, often repeated,* and *long continued.* The muscles and ligaments differ finally, not in strength, but in length; and it is only by reversing or correcting position, by both volition and machinery, that we can rationally hope to cure lateral curves of the spine. If inequality of muscular force caused curvatures, the blacksmith and the weaver would seldom continue straight, for they exercise, almost exclusively, the muscles of the right side of the trunk. Those who have seen many cases of this disease know that it affects chiefly *females,* and that many of its subjects are robust and healthy, some of them eminently so. The pursuits and pastimes of boys produce every variety of posture, while nearly all the amusements and studies of girls are of a quiet nature, and are pursued in a common attitude. Hence the greater frequency of curvature in them, and the general resemblance in the direction of that curvature.

We join heartily with our author in his condemnation of the mechanical couches of the Maisons de Santé; and believe, with him, that the corsets and rod of Levacher, now known as the *Minerva brace,* injure the health by compressing the chest and abdomen. When machines are used, let them tie down no muscle, confine no organ so as to impair its function, and let them, if possible, admit of free exercise, and easy locomotion. In fine, while efforts are made, both by instruments and muscular training, to restore a natural shape, and to keep the form correct, until the muscles and ligaments become of equal length, let nothing be done to divest the patient of that general vigour, which lateral curves frequently leave undiminished. J. K. M.

XXVIII. *Eliae Bujalsky Tabulae Anatomico-Chirurgicae Operationes Ligandarum Arteriarum Majorum Exponentes.* St. Petersburgh, Elephant folio, pp. 32, Plates 14.

This is one of the most splendid works on surgery we have ever been called on to examine, and the information it contains is clearly expressed and systematically arranged; but it may be doubted whether the usefulness of the work is not much lessened by its gigantic size and expensive magnificence.* Nothing less, however, could be expected, as this treatise is published under the immediate patronage, if not at the expense, of the emperor and autocrat of all the Russias, NICHOLAS I. The copy which we have had an opportunity of examining, was liberally presented to the University of Pennsylvania by the author, and is probably the only one which will reach this country; at all events, its costliness must prevent its being in the possession of the profession generally.

The directions for taking up the great arteries are preceded by a concise statement of the anatomy of the vessels, and are given with much clearness and precision. We have not in any case observed any very striking difference between these directions and those usually laid down in our books, and shall not therefore make a transcript of them. Professor Bujalsky has enjoyed very ample opportunities of observation, during thirteen years spent as a prosector and adjunct professor of anatomy. During this period he has examined fifty instances of aneurism variously situated, and some of enormous magnitude. From these he is led to conclude, 1st, that all spontaneous aneurisms arise from ulceration of the arterial tunics; 2d, that the muscular tunic is always more injured than the others; and 3d, that he never saw aneurism consisting of a mere dilatation of the tunics, without organic lesion, although he does not pretend to assert such a condition to be impossible. According to his views, every aneurism should be preceded by inflammation of the arterial tunics, which terminating in suppuration or induration, (ossification,) the motion of the blood dilates the parts into tumours, which are modified in size and character by the extent of the ulceration and the relations of adjacent parts.

We have no doubt of the usefulness of Professor Bujalsky's anatomico-surgical tables to the surgeons of Russia, who are most probably provided with such books by the government; and we might have mentioned earlier that the text is given both in the Russian and Latin languages in parallel columns. The plates are very finely engraved, after dissections made by the author, and add greatly to the beauty of the work. Like the text, moreover, they might have been as usefully displayed in a much more convenient and portable form. The author has promised to continue his illustrations through the operations upon smaller vessels, &c. and under whatever form these be published, we shall be happy to make our readers acquainted with them. J. D. G.

* A clear notion of the size of the page, and the type upon which the work is printed, may be formed from this fact, that with the volume expanded at one end of a sofa of usual length, I read it with perfect ease, seated at the opposite extremity, facing the book.

XXIX. *Traité des Maladies du Foie.* Par AUGUSTE BONNET, M. D. de la faculté de Paris, associé resident de la Societé Royale de Medecine de Bordeaux, &c. &c. Paris. Villeret & Co. 1828, pp. 201, 8vo.

Dr. Bonnet some time since published an essay on diseases of the liver, for which he received a prize medal of the value of two hundred francs from the Medical Society of Emulation. The present work is on a more extended and comprehensive plan, and is intended as "a complete treatise on the affections of that organ." We are certainly much in want of more precise and certain information relative to the characteristic symptoms of the different functional and organic changes in this important viscus, which although they can be scarcely overlooked or misunderstood, when of a high grade, yet in the present state of our knowledge it is extremely difficult to recognise the existence of certain morbid actions, which may be silently and imperceptibly deranging its functions and destroying its structure. Even in hepatitis, certainly the most common of all the disorders of the liver, there is much uncertainty and want of precision in the detail of symptoms as given by the best authors, particularly those of the incipient stage.

Dr. Bonnet has attempted to supply this deficiency, and the plan on which he has proceeded, is the only one from which permanent and satisfactory results can be expected. He is a disciple of the physiological school, although he differs from Broussais in some leading points, which we shall advert to in the progress of our notice.

The first part of his work is on irritation of the liver, in the preliminary observations to which, he maintains that whenever the organic action of a tissue transcends the normal type, without the function of the tissue being deranged, that this is not a mere *excitation* of the part, but is an irritation, without inflammation.

He divides his monograph of irritation of the liver into five parts, the first of which is devoted to the consideration of the symptoms; the second treats of its terminations; the third of its causes; the fourth of the prognosis; and the fifth of the treatment.

The first degree of hepatic irritation, according to Dr. Bonnet, is either where there is an augmentation of the organic action, but not accompanied by inflammation, or where, although there may be inflammation, it is of so slight a character as not to present the usual symptoms of hepatitis. The great difficulty is to distinguish between these states, though in a practical point of view, it is perhaps of little importance, as the same treatment is applicable to both. Dr. Bonnet thinks that the usual train of symptoms which are given as characteristic of acute hepatitis, are in fact those of a simultaneous irritation of the digestive canal, the peritoneum and of the liver, or gastro-hepato-peritonitis. He gives several cases in support of this opinion, which certainly prove that when there is an acute inflammation of the hepatic tissue, it is often propagated to the gastro-intestinal mucous membrane and peritoneum. He gives the following as the symptoms of simple acute irritation. "Bitter taste in the mouth, tongue covered with a yellow coat, bilious dejections, sometimes yellow urine, a yellow tinge around the lips and alæ of the nose; when it has advanced

still further, but is yet confined to the hepatic tissues, there is superadded a feeling of general uneasiness, unpleasant feeling in the right hypochondriac region, a deep-seated, dull pain in this part, at first only felt when pressure is made, but gradually becoming permanent; when it has become still more violent, and the peritoneum and alimentary canal are implicated, the symptoms are of course of a mixed character, but those which appertain to the inflammation of the liver, are thus given by our author; "a dull, deep-seated pain, usually in the right hypochondriac region, but sometimes in the epigastric or even the left hypochondriac, accompanied by feelings of great distress, fulness, suffocation, and a difficulty or impossibility of lying on the left side, bitter taste in the mouth, yellow colour of the tongue, yellowish tinge of the eyes and skin, whitish, or bilious and acrid stools, yellow, scanty urine, having an oily appearance, and depositing a reddish sediment." These symptoms, however, are not to be found in all cases, and the only pathognomonic signs on which perfect reliance can be placed, are pain and increase of volume in the liver. Dr. Bonnet gives very minute directions as to the method of making examinations in cases of hepatitis, which are worthy of attention.

Hepatic irritation may terminate very variously, as in hypertrophy, obstruction, or any of the usual consequences of inflammation, but it most commonly becomes chronic, particularly where it depends on a gastro-intestinal lesion: when chronic hepatitis lasts for a length of time, the liver generally becomes very much enlarged. It may also pass into a fatty state, (l'état graisseux,) this termination, according to M. Louis occurs most frequently in females; in forty-nine cases he observed, ten only being males.

Dr. Bonnet next treats of the causes of irritation of the liver, and reduces them to very few, as blows, wounds, &c. Almost all those given by other authors he thinks operate in a secondary manner, by causing a gastro-enteritis or peritonitis: thus he says a residence in tropical climates does not induce disorders of the liver, except from its inducing a derangement of the digestive canal. In fact, one of the great objects of Dr. Bonnet's treatise appears to be, to prove that the most frequent cause of hepatitis, is some inflammation of the gastro-intestinal mucous membrane. The following remark, if correct, merits attention. A primary inflammation of the liver is almost always of an acute character, whilst secondary hepatitis, on the contrary, assumes a chronic form at its very commencement.

In mentioning the differences that exist between his theory and that of Broussais, the author bestows upon himself most unlimited praise, and completely spares his readers all trouble in making up their opinions as to his merits. We give an extract as a specimen of his self-gratulation. "The theory of this author, (Broussais,) differs in many respects from that I propose. In the one, only one degree of hepatic irritation is recognised; in the other this irritation is traced from its commencement, followed in its progress, and viewed in every stage and form. In the one, a great difficulty is encountered, the coincidence of wounds of the head with abscess of the liver; in the other, this difficulty is attempted to be surmounted, and with success. Finally, the one is susceptible of several solid objections; the other affords every explanation, and is always in accordance with facts."

There is little or nothing new in Dr. Bonnet's account of the prognosis in diseases of the liver; we therefore pass it over without observation.

The treatment he recommends is of course founded on his theory of the implication of the mucous membranes of the abdomen. This is we think the best part of his work, and is worthy of an attentive perusal. It is, as may be supposed, in strict accordance with the doctrines of the modern physiological school, and he reprobates in the strongest manner the perturbating system. "One of the principal causes of want of success in the treatment of chronic hepatitis, arises from attempting to combat it by a host of remedies, whose peculiar properties irritate the alimentary canal to a great degree." He also thinks that resolving plasters and blisters are of little utility in chronic inflammations of the liver.

The next portion of his essay is devoted to the consideration of passive sanguineous congestions of the liver. The liver, it is well known, is very liable to engorgements, perhaps more so than any other part of the body, many of these our author thinks occur without any previous or existing irritation of this organ. Their general causes, he says, are some obstacle to the course of the blood, or from a scorbutic diathesis. "These are almost all incurable, and hence the hepatic congestion is of little consequence."

The remainder of the work contains observations on hepatic asthenia, atrophy of the liver, hæmorrhage of the liver, biliary calculi, hepatic colic, ascites from hepatitis, diseases of the biliary ducts, icterus, and bile. Dr. B. rejects all the modern theories of the causes of icterus, and asserts that the only one that ought to be adopted is that of the ancients, the actual mixture and circulation of the bile with the blood. R. E. G.

XXX. *Méthodes de Traitement proposées pour guérir la fistule Urinaire Vesico-Vaginale.* Par M. Le Professeur Naegele de Heidelberg. Paris, 4to. pp. 8. Pls. liths. II.

Vesico-vaginal fistulæ have long been regarded as among the most incurable of surgical diseases, and are productive of such cruel sufferings to patients, that every attempt made for their relief should be received with attention. The method proposed by Dickson, of curing such fistulæ by the use of the flexible catheter, can only be available where there has been very slight loss of substance. Desault's plan of applying a cylinder of cork covered with wax or gum elastic to produce approximation of the lips of the wound, is generally unsuccessful, and if a cure be obtained by its use, it is not sooner than at the end of six months or a whole year. Henry van Roonhuysen appears first to have proposed the suture, and described a mode of operating, but it is doubtful if he ever actually operated. Christopher Voelter proposed that when the neck of the bladder was torn, the edges of the wound should be united by some stitches made with sharp curved needles and a waxed ligature. He once performed this operation unsuccessfully, which is not surprising, since it is almost impossible to pierce the edges of the opening properly, so deep within the vagina, with a simple curved needle held between the fingers, unless it were done soon after parturition while the vagina remains much dilated.

Professor Naegele has operated successfully, with and without the suture, to supply the place of which, when the fistula is small, he employs a pair of uniting forceps, devised for the purpose. These are so contrived as to pinch together the edges of the fistula with any degree of tightness, after these have been made raw for the purpose, and are detached from the handles, to remain in the vagina till the edges have cohered. Previous to their application, a silver catheter is passed into the bladder, and the forceps are made to grasp the prepared edges of the fistula in such a manner as to bring them together below the inferior surface of the catheter.

When he uses the suture, Professor Naegele employs a peculiar *bistouri caché* to freshen the edges of the opening, and curved instruments for conveying the ligature, somewhat similar to those used in staphyloraphy, to which the operation bears considerable resemblance. The want of his illustrative plates renders it useless to attempt a specific description of these instruments, and his exact mode of proceeding. The patient is placed as in the operation for lithotomy, though it is unnecessary to tie the limbs; a catheter is passed into the bladder, and retained there, while the fistula is examined, and the edges laid bare with the curved and pointed scissors or bistoury. The ligatures are then passed by the aid of the peculiar curved and pointed instruments, and the edges of the wound drawn together under the catheter. If the vagina be previously dilated by the use of a gradually enlarged sponge tent, it appears to us that the operation might be rendered much easier, and might be performed with instruments less complicated and difficult of management than those proposed in the paper before us. J. D. G.

XXXI. *Medico-Chirurgical Transactions.* Published by the Medico-Chirurgical Society of London. Vol. XV. Part I. London, 1829.

The Medico-Chirurgical Society of London have just presented to the public the first part of the fifteenth volume of their transactions, and in pursuance of the plan we have adopted, we shall lay before our readers a brief analysis of its contents.

The initial article is entitled a pathological enquiry into the secondary effects of inflammation of the veins; and is by James M. Arnott, Esq. No inconsiderable degree of doubt prevails as to the cause of the alarming constitutional affection frequently attendant on inflammation of the veins; while the origin of those abscesses and inflammations in distant parts, which sometimes occur after injuries, is involved in still deeper obscurity. A desire to remove the doubts which attend the former, and to dispel the obscurity which surrounds the latter, has given rise to Mr. Arnott's investigations.

Mr. A.'s attention was more particularly called to this subject by some occurrences which marked the course and termination of three fatal cases of inflammation of the veins after venesection, which he had an opportunity of observing. In one of these a deposition of pus, without signs of previous inflammation, took place under the skin of the opposite forearm;—in another, destructive inflammation of the knee joint, with a deposition of pus into the cellular substance of the thigh;—and in the third, collections of matter at several points in the substance of the lungs;—while in all three, the inflammation of the vein

did not extend to the heart. These circumstances suggested inferences as to the cause and nature of the constitutional affection in cases of phlebitis, and views with regard to the origin of abscesses in remote situations arising from injuries, which led to an examination of the evidence on both these subjects, to be found in the writings and observations of others. The results of this investigation Mr. A. has presented to the society.

He divides his communication into two parts; in the first he investigates the cause of the constitutional affection attendant on phlebitis, and in the second, the origin of those abscesses and inflammations in distant parts which sometimes succeed to injuries. He commences the first part with a detail of the views entertained by the most eminent writers relative to the cause of the constitutional affection attendant on inflammation of veins, and then relates seventeen cases of fatal phlebitis arising from venesection or wounds; some of them observed by himself, the others selected from various sources. These cases justify the inference drawn from them by Mr. A. that death does not result from the extension of the inflammation of the vein from the heart; since, of ten cases which followed venesection, in not one of them was the superior cava affected, much less the heart; and in half this number, inflammation had not reached to the subclavian, or even to the axillary vein. In three cases, where the inferior cava had become inflamed, in one only is the heart represented as implicated, and in this, though it is said that "there were marks of diffused inflammation extending to the right auricle of the heart," the signs of adhesive inflammation terminated at the entrance of the emulgent vein.

In relation to the question, whether the secondary affections in this disease, depends, as has been alleged, upon the entrance of pus into the circulation, it may be remarked, that in fourteen cases out of the seventeen, pus, or pus in conjunction with lymph, was present in the vessel after death; in two instances no mention is made of pus, the contents of the veins being described in one as "adhesive matter," in the other, as "flakes of lymph:" in one case only, where the inflammation occurred in a vein previously diseased, or in a vein, the branches of which at least were varicose, neither pus nor lymph was found in the vessel.

It results from this, Mr. A. thinks, "that although pus is present in the veins in the great majority of fatal cases of phlebitis, and that although it should appear from the character of the general symptoms, and the effects produced upon animals, by the injection of a similar fluid into their vessels, that the passage of pus into the circulation is probably the principal, yet the circumstances do not justify us in regarding it as the sole cause of the secondary affection." He adds, "if then, the constitutional affection in phlebitis is to be explained by the introduction of a fluid into the circulation, which contaminates the blood, and operates as a poison, this property must be attributed to inflammatory secretions generally from the vein, although not purulent."

Mr. A. here states a curious fact which had not previously been observed; he says, that according to his observation, the inflammatory changes in the coats of the vein, "are limited by the passage of a current of blood; where a trunk is concerned, the boundary being the entrance of a branch, and where a branch is concerned, the boundary being the junction of this with the 'trunk.'" He does not, however, attempt to explain "how it happens that this same inflam-

mation, which has stopped short at the entrance or passage of a current of blood, may not only already have passed several currents, but have extended itself into the vessels conveying them."

The secondary affection in phlebitis usually shows itself in from two to ten or twelve days after the receipt of the injury which has occasioned the inflammation of the vein; when the vessel has been previously diseased, sometimes sooner. The symptoms are thus described by Mr. A.

"Great restlessness and anxiety, prostration of strength and depression of spirits, sense of weight at the præcordia, frequent sighing or rather moaning, with paroxysms of oppressed and hurried breathing, the patient at the same time being unable to refer his sufferings to any specific source. The common symptoms of fever are present, the pulse is rapid, reaching sometimes to 130 or 140 in a minute, but is in other respects extremely variable. There is often sickness and violent vomiting, especially of bilious matter. Frequent and severe rigours almost invariably occur, sometimes to the number of three or four in the course of a few hours. The general irritability and deep anxiety of countenance increase, the manner is quick, and the look occasionally wild and distracted. When left to himself, the patient is apt to mutter incoherently, but on being directly addressed, is found clear and collected. The features are pinched, and the skin of the whole body becomes of a sallow, or even yellow colour.

"Under symptoms of increasing debility, and at a time when the local affection may appear to be in a great degree subsiding, secondary inflammations of violent character, and quickly terminating in effusion of pus or lymph, very frequently take place in situations remote from the original injury; the cellular substance, the joints, and the eye have been affected, but it is more particularly under a rapidly developed attack of inflammation of the viscera of the chest, that the fatal issue usually occurs. Whether this is observed or not, death is always preceded by symptoms of extreme exhaustion, such as those of a rapid feeble pulse, dry, brown, or black tongue, teeth and lips covered with sordes, haggard countenance, low delirium, &c."

The duration of this affection varies considerably; in the cases cited, death occurred at different periods between the fourth and fiftieth day.

The morbid appearances after death are very remarkable, and such as are usually regarded to be indicative of the recent existence of violent inflammation, and that too in various organs, and distant parts of the body. These are:—

"In the chest—effusions of sero-purulent fluid into the cavities of the pleuræ and pericardium, exudation of coagulable lymph on the surfaces of the heart and lungs, hepatisation of the latter organ, the infiltration of pus into its tissue, or small collections like a mixture of pus and lymph. Such appearances presented themselves in ten cases out of seventeen; in three the thorax was not examined; in two the condition of its contents is not noted; and in two, no diseased appearances were observed.*

* A fluid state of the blood which has been remarked after death from phlebitis, is neither invariably noticed, nor does it prevail throughout the whole of the circulating system. The cavities of the heart usually contain coagula. The tendency to fluidity—a change in the colour of the blood—and a staining of the vessels, circumstances occasionally to be met with after death from phlebitis, Mr. A. says, he is unable at present to appreciate the value of, as evidences of disease.

In the cellular substance, intermuscular as well as sub-cutaneous—pus and sero-purulent fluid has been extensively deposited, sometimes in collections like abscesses, at others, appearing more like an effusion into its cells, than as resulting from the common process of inflammation. These collections most frequently occur in the vicinity of the joints. In two cases pus was deposited under the skin of the opposite forearm, near the wrist; in one, with inflammation of the knee-joint, into the intermuscular cellular substance of the corresponding thigh, and into that external to the joint of the opposite shoulder; in one, into the intermuscular cellular substance of the opposite leg and of both forearms; in one into the interfibrillar cellular tissue of the corresponding pectoral muscle, and in another, between the sternal extremities of the two first ribs and pleura.

"A disease of the joints, consisting of a most violent inflammation of the synovial membrane, its distention with purulent matter, destruction of the cartilage and baring of the bones. These changes too, taking place in the brief space of a few days, the knee having been first attacked with pain four days before death, which again took place in sixteen from the date of the injury of the vein which caused its inflammation. In two other cases there was affection of the knee-joint, but the parts were not examined after death.

"In the eye—opacity of the cornea, injection of its blood-vessels, and destructive changes in its humours or coats, occurred in one.

Besides these affections, there were found in five instances, within the cranium, opacity and thickening of the tunica arachnoides, effusion between it and the pia mater, and increased secretion into the ventricles. In nine, the head was not examined; in three, no morbid appearances were noticed.

"The morbid appearances above described are, as it will have been remarked, met with singly or variously combined, in particular cases; and from the variety of situations in which these secondary local affections have been observed, it seems probable that there are few organs or parts in which they may not occur. But although some of them are generally found present, the constitutional affection in phlebitis occasionally proves fatal, without a secondary local affection having developed itself."

On considering the progress of the secondary affection in phlebitis, such as it has been described, Mr. A. thinks it is impossible not to be struck with the resemblance which this bears to that of diseases arising from the inoculation of poison. There is, he says, "in the first place, a local affection, (it may be of a very trifling extent and severity,) upon which the secondary affection supervenes in the form of great constitutional disturbance, followed by violent inflammations in one or more parts of the body. With this general resemblance to inoculated diseases, there is one to whose characters it more particularly approximates; viz. that which arises from the operation of poison received in wounds from dissection. We have an equally early appearance, and an equally rapid development of symptoms nearly similar, succeeded by destructive inflammations in one or more situations remote from the primary affection, with equally fatal results. These secondary inflammations very much accord also in the parts which they attack. If the cellular substance is in a particular manner affected, in consequence of the introduction into the system of the poison of dead animal matter, this also occurs as a consequence of phlebitis, and some

of the more obscure affections of the first class of cases may even perhaps be elucidated by the events of the latter."

From the foregoing facts and arguments, Mr. A. concludes, that death, in cases of phlebitis, does not take place from the inflammation extending to the heart; whilst the history and character of the symptoms which precede this event, the very small portion of vein which is sometimes found to have been inflamed, and the general presence of pus in its cavity, all tend, he thinks, "to establish, that the entrance of this fluid into the circulation is the principal cause of the alarming and fatal consequences of phlebitis, a similar influence being perhaps also possessed by any inflammatory secretion from the vein."

Part II. *On the origin of those abscesses and inflammations in distant parts which sometimes occur after injuries.* We pass over the different views that have been entertained on this subject, to the consideration of those entertained by our author. The secondary affections succeeding to wounds, are, effusions of pus and sero-purulent fluid into the cavity of the chest, and inflammation of the pleura; similar affections of the cellular substance; effusion of pus into, and inflammation of the synovial membranes; depositions of pus and tuberculous abscesses in different organs of the body, viz. the brain, lungs, heart, liver, spleen, and kidney.

Now, when it is considered, says Mr. A. that abscesses have formed in various parts of the body from the ligature merely of a vein, as the saphena—that pus was deposited under the skin of the forearm in one case of phlebitis—that rapidly destructive inflammation in the knee joint took place in a second—that the same has occurred in the eye in a third—"that where the symptoms of inflammation of the chest were observed during life, the effects witnessed, on examination after death, were of very disproportionate degree and extent—and that effusions of coagulable lymph, and sero-purulent fluid into the chest, together with abscesses in the lungs, were found where no symptoms had indicated their existence;—I say, when it is considered that *all* these consequences ensued from so simple and definite an injury as the puncture, division, or ligature of a vein, it is impossible to resist the supposition that, where similar secondary affections have succeeded to a more extensive wound, they may in reality have originated in the same cause, viz. inflammation of a vein or veins."

If such a view of the subject be correct, we ought to have, says Mr. A. on the one hand, in cases where the consequences already mentioned have succeeded to wounds and injuries, whether of the extremities or head, to find evidences of inflammation of the veins of the part which had been primarily or mechanically injured; and, on the other, to meet with similar secondary affections in cases where inflammation of the veins is known to be of common occurrence, as after parturition. That this is actually the case Mr. A. proceeds to show.

Affections of the viscera, of the joints, and cellular substance, after injuries of the extremities. Four cases are here related of secondary affections of the viscera after injuries of the extremities, in connexion with inflammation of the veins in the wounded limb.

Affections of the viscera, of the joints, and cellular substance, after injuries of the head. Systematic writers afford us no information relative to the nature of the

injuries of the head, to which secondary affections of the viscera, of the abdomen, and chest succeed, or to the circumstances under which these occur. To supply this deficiency, and to enable us to arrive at more satisfactory conclusions, as to the origin and cause of secondary affections in distant parts after injuries of the head, Mr. A. has collected from various sources thirty-three cases, the more important particulars respecting which, he relates in his paper.

"From a consideration of these cases, it appears that affections occurring as secondary to injuries of the head were observed, in twenty-one, seated in the abdominal viscera;* in five, in the thoracic; and in six, in the abdominal and thoracic conjointly. That they consisted of collections of pus in the liver and in the lungs; and of effusions of pus and sero-purulent fluid into the cavities of the chest. That combined with some of these, there was further observed, a deposition of purulent matter, in one case, in the substance of the heart; in one, in the kidney; in one, in the spleen; and in one, under the integuments of the back; in one, albuminous effusion on the surface of the intestines; and in one, inflammation of the liver, without the formation of matter. In two cases, inflammation of the surface of the liver without suppuration was the only morbid appearance observed. In one case, an affection of the joints, and the deposition of pus into the cellular substance around them occurred without any disease of the abdominal or thoracic viscera having been noted.

"The injury which the head had sustained in these cases consisted, in twenty-three, of fracture or fissure of the cranium, in all compound, with the exception perhaps of two, where the circumstance is not stated. In ten, the osseous covering of the brain was neither fractured nor fissured; but with the wound of the soft parts, which uniformly existed, there had been in several a portion of the outer table and diploe sliced off, whilst in all, the bone seems to have been exposed. The wound of the soft parts was in several instances of trifling extent, and had, in some nearly, and in one actually healed over when the unfavourable symptoms commenced; but in these cases disease of the bone seemed to have remained, as the pericranium now became detached. With regard to the morbid appearances within the cavity of the cranium, it will be sufficient to state, that whilst these vary considerably, in several there was inflammation simply of the dura mater, without any appearance of purulent matter, and that in three instances no diseased changes whatever were observed. In short, the only circumstance these thirty-three cases have in common is a wound of the soft parts.

"The general course of these cases seems to have been this, and in the great majority, twenty-four, it is so stated, that the patient for some time did well, having recovered his consciousness, where this had been lost, which was frequently not the case, was free from fever, and the wound suppurating kindly; that afterwards unfavourable symptoms took place, consisting of fever, rigors, nausea and vomiting, delirium, yellow colour of the skin, and sometimes,

* Although these thirty-three cases show the nature of the secondary affections succeeding to injuries of the head, they cannot be considered as offering a fair representation of the comparative frequency of the occurrence in the abdominal and thoracic viscera. Previous to the time of Morgagni, abscess of the liver subsequent to such injuries, had in a measure engrossed attention, and accordingly out of thirteen cases from writers previous to his time, in twelve, disease of the liver is noted, and in two of these only, the condition of the thoracic viscera mentioned.

shortly before death, pain in the right hypochondrium, or affection of the chest. There was some difference in the period at which these symptoms appeared; but of nineteen cases, the earliest of which was the seventh, and the latest the twenty-fourth day, the average was between the thirteenth and fourteenth day after the accident. The average period of the fatal termination of the same cases was between the twenty-second and twenty-third days, the earliest being on the fifteenth, and the latest on the thirty-seventh subsequent to the injury. In one instance, not included in the above number, the patient did well until the eightieth day, when on an attempt being made to remove a portion of bone, adhering to the dura mater, general disturbance took place, and death in a few days. In another exception to the more ordinary periods, the same event occurred four months and a half after the receipt of the injury."

From the preceding summary Mr. A. thinks it will appear, that abscesses and inflammations occurring in the viscera of the abdomen and chest, after injuries of the head, present a resemblance to similar affections succeeding to wounds of other parts of the body, sufficient to justify the inference, that they arise from the same cause. That cause Mr. A. conceives to be inflammation of the veins—the consequent production of pus in their cavities, and the entrance of this into the circulation. In accordance with this view, it may be remarked, that the only two cases of those cited by Mr. A. in which the state of the part is described, inflammation of the superior longitudinal sinus existed, its cavity, in both instances, containing purulent matter; in the one, firm, fibrinous coagulum, and in the other, with a layer of organized lymph on its inner surface.

Affections of the viscera, joints, eye, cellular substance, and skin after labour. Inflammation of the veins of the uterus appears to be not an unfrequent occurrence; those, however, who have treated of the subject, have had chiefly in view the primary local affection and morbid appearances, yet Mr. A. says, there is sufficient evidence to show that inflammation and suppuration of these veins also, are followed by various secondary affections. Four cases in support of this are here noticed; in one, abscess in the liver was found with inflammation of the uterine and spermatic veins; in the second, abscesses of the right lung, with inflammation of, and purulent effusion in, the right spermatic vein; in the third, gangrene of the lung succeeded to inflammation and suppuration of the left spermatic vein; in the fourth, a small collection of matter between the neck of the bladder and symphisis, occurred with pus and sero-purulent fluid in the left spermatic vein.

The fact of an affection of the joints occurring after injuries, has been noticed by several writers; four cases are referred to by Mr. A. who considers the disease of the joints in these cases, as connected with inflammation and suppuration of the veins of the part which had been the seat of the mechanical injury; but it must be confessed that sufficiently conclusive evidence of the correctness of that opinion has not been adduced.

Mr. A. next proceeds to show from various writers that a violent and destructive disease of the joints takes place in the puerperal state. That this affection of the joints is connected in puerperal women with inflammation of the veins, Mr. A. thinks, "there is an appearance of direct evidence in two of the cases related by M. Velpeau, in his paper on Phlegmasia Alba Dolens, although the description is somewhat incomplete. In one of these, death took place on

the sixtieth day after labour, in the other on the twenty-sixth, under great constitutional disturbance and exhaustion. In both, purulent matter was contained in the hypogastric and femoral veins. In the first case the interpubic cartilage was softened, and pus was found in this situation; the same appearances were observed in the left sacro-iliac symphysis; the hip-joint, also, contained purulent matter. In the second instance, the sacro-iliac and pubic symphyses were in a state similar to that just mentioned."

The last circumstance to which Mr. A. alludes, is the occurrence in the puerperal state of a disease of the eye. In one case referred to, in which there was inflammation and suppuration in the vena saphena, the cornea became opaque, the vessels of the conjunctiva injected, and after death destructive changes were found within the globes. In another case which is related, the left eye was completely disorganized, arising, Mr. A. thinks, from inflammation of the jugular vein; the evidence does not, however, appear conclusive: we shall give the case in our periscope, (Dep. Pathology,) that the reader may judge of this point.

Such are the facts which have induced Mr. A. to conclude, "that the inflammations and abscesses which arise in remote situations, after injuries, whether of the extremities or of the head, or after the *process of parturition*, are attributable to the existence of phlebitis in the part of the body primarily affected."

That the facts fully justify such a conclusion, we should feel some difficulty in admitting; but even if the inference be deemed legitimate, it remains to be explained how phlebitis acts in giving to some of the secondary affections their peculiar characters—how, for instance, it sometimes induces depositions of pus and lymph, unattended by those changes in the texture of the parts which usually precede the production of these fluids; for it cannot be supposed that the matter so deposited is actually that which has been brought into the circulation from the inflamed vein or veins—how it induces the disease of the eye in which pus is not deposited—or finally how pus circulating in the general system determines disease of, or depositions in, certain organs in preference to others, and these organs not always those nearest to the seat of injury.

The second article is entitled "A contribution to the Pathology of Phlegmasia Dolens," and is by Robert Lee, M. D. Physician-accoucheur to the British Lying-in Hospital. The object of this paper, which consists principally of five cases, appears to be to prove that inflammation of the coats of the iliac and femoral veins in puerperal women, gives rise to all the phenomena of genuine phlegmasia dolens. This subject has been so ably discussed in the excellent paper of Dr. Dewees, in the original department of this number, that it is unnecessary to enquire here into the correctness of that position. We shall merely remark, that we think that sufficient evidence can be adduced to show, that the disease consists essentially in an inflammation of the lymphatics or white capillaries of the cellular tissue of the thigh.

The succeeding paper is an account of an "analysis of a quantity of fluid drawn from a hydrocele of some years standing," by J. Bostock, M. D., F. R. S. We pass over this paper as of little or no practical value.

The fourth article is on the use of the subcarbonate of iron in tetanus, by John Elliotson, M. D., Cantab., F. R. S., &c. &c. This communication consists of the account of two cases of tetanus treated with large doses of subcar-

bonate of iron; the patients got well. That they were cured by the medicine administered, we cannot entertain any suspicions. A third case is given, in a postscript, in which the same treatment was tried, but the patient died.

The fifth communication is an account of a case of aneurism by anastomosis of the forehead, treated by the application of ligatures, by B. C. Brodie, F. R. S., Surgeon to the King, &c. In 1809, a girl about five years of age received a severe blow on the forehead, which was followed soon afterwards by a small pulsating tumour, not larger than a pea, at the seat of injury. For several years it remained stationary, but in 1821, it had evidently increased in size, and an attempt was made to cure it by pressure, but without success. In 1824, the tumour still continuing to increase, another attempt to restrain its growth by pressure was instituted, but it was equally fruitless. In June, 1826, the disease having made still further progress, Sir Astley Cooper applied a ligature, at four different times, round each of the four principal arteries by which the tumour was supplied.

"The result of these operations was, a slight diminution in the size of the tumour, and some relief from pain; but even this favourable change was of short duration. In the course of the winter of 1827, the tumour again grew larger, and the painful sensations returned with redoubled violence, attended with a constant sense of weight over the eyes, and excessive depression of spirits. Occasionally there were paroxysms of pain still more violent than what was usually experienced, and followed by a state of extreme languor and exhaustion."

The patient remained in this state, except that the tumour continued slowly to enlarge until October, 1828, when she was seen by Mr. Brodie. "The tumour was now bigger than a large double walnut, occupying a spot on the right side of the forehead, immediately below the margin of the hairy scalp. When the fingers were applied to it, they received an impression as if it was composed of a mass of tortuous vessels, and a strong pulsation was perceptible in every part of it. The skin covering the tumour was thin, and on some occasions, as in coughing, when the vessels were unusually distended, it appeared as if on the point of bursting. When the scalp was shaved, large and tortuous arteries were to be seen, even from a considerable distance, passing into the basis of the tumour, in every direction, from each temple, from the orbit of the right eye, and over the crown of the head from the occiput. Pressure being made on the two temporal arteries at the same instant, the pulsation of the tumour was perceptibly, but not greatly, diminished. There was a constant sense of weight and pain in the forehead, and the latter was very much aggravated by pressure on the tumour, especially on a particular spot towards its upper edge."

Mr. B. thought that there was no reason to expect advantage from any operation which had not for its object the complete extirpation and removal of the diseased structure. But the attempt to accomplish this object by the knife, would necessarily be made at the risk of a most alarming hæmorrhage; and the application of the actual cautery, or of caustic, would not only be uncertain as to the result, but, if carried to a sufficient extent, completely to answer the intended purpose, might occasion such injury to the bone and periosteum as would be productive of much subsequent inconvenience, if not actual danger,

to the patient. He therefore determined to endeavour to extirpate the tumour, by means of ligatures so applied as to produce the complete strangulation of it at its base. Accordingly, on the 15th of October, "a long steel needle the length of which was about double the diameter of the tumour, was passed between it and the periosteum, penetrating the skin on each side. By means of this needle, the tumour was raised as much as possible, and a second needle was introduced in the same manner, but beneath, and at right angles to the first. A very strong silk ligature was then bound several times round the base of the tumour below the needles as tight as it could be drawn. The tumour immediately assumed a purple colour, as if in a state of strangulation. The operation occasioned great pain both at the time and afterwards; but from the instant of the ligature having been applied, the peculiar sufferings occasioned by the disease were at an end.

"In the evening the pulse being strong, the skin hot, and the pain caused by the ligature very severe, some blood was taken from the arm.

"October 16th. The pain was somewhat abated, the tumour had assumed a dark colour, and had begun to shrink.

"October 17th. The tongue was furred, the pulse hard and frequent, and the skin hot. More blood was taken from the arm.

"October 18th. All the arteries entering the tumour had either ceased to pulsate, or pulsated less strongly than before, with the exception of those at the upper part. Concluding from this last circumstance that the strangulation was not every where complete, and that a still greater degree of compression was necessary, I armed one of the needles with a strong double ligature, then drew it through, and having removed the needle, tied the ligatures one on each side.

"October 20th. The other needle was armed in the same manner, and by means of it another double ligature was passed through the base of the tumour and tied like the former one.

"October 22d. The slough had begun to separate at its edges, and all severe pain had ceased. The pulsation at the arteries at the upper part was greatly diminished.

"October 26th. The slough came away without the smallest hæmorrhage. Dry lint, with strips of adhesive plaster over it, was applied to the ulcerated surface.

"In the course of a few days the ulcer had assumed a healthy appearance, and had begun to granulate.

"The appearance of the ulcer was very carefully watched, and two or three times the nitric acid was applied to some spots on its surface, in which there was an appearance that led Mr. Keate and myself to suspect that there might be a disposition to reproduce the original disease. The sloughs made by the nitric acid soon separated; the sore continued to heal, and the pulsation of the arteries in the neighbourhood to diminish.

"December 2d. The cicatrix was completely formed, and nothing unusual was to be observed, except that between it and the eyebrow there was a slight appearance of fulness, manifestly depending on the skin at this part having been for a long time much distended, and having not yet returned to its original dimensions. There was no more pulsation in the arteries, which had formerly

been so much enlarged, than in those of the other side of the forehead, and the patient was free from pain and all other inconvenience."

Article sixth is an account of two cases of fracture of the thigh-bone, taking place without any violence, in which a diseased state of the bones appears to have been the predisposing cause of the fracture, and concurring with cancer in the breasts in both patients; by Thomas Salter, Esq., F. L. S. One of these patients was eighty-five, the other fifty-six years of age; they both suffered much from previous pain and lameness.

The concluding article consists of observations on the local diseases termed malignant; by Benjamin Travers, F. R. S., &c. This paper, of which part only is published, is highly interesting, but does not admit of analysis within the limits to which we are at present restricted. When the paper shall be completed, we will probably present a sketch of the views entertained by the author.

XXXII. *Journal der Practischen Heilkunde.* Herausgegeben von C. W. Hufeland und E. Osann. Berlin. Small 8vo. in Nos. of 8 sheets.

This is one of the oldest and most respectable of the German journals, having reached its sixty-eighth volume; of which we have received five numbers, the latest being for May, 1829. It is published monthly, in numbers containing eight sheets, small octavo or duodecimo, printed in the Roman character, upon rather coarse paper, and costs fifteen rix dollars, sixteen groschen per annum. The contributions to this journal of practical medicine, will bear comparison with the best of the periodicals of the same country, and it has been the vehicle by which many valuable observations and improvements have been communicated to the profession. The editors are physicians of much experience, who have occupied places of public trust, in which they have enjoyed excellent opportunities for observation and experiment, and are well qualified to conduct a work of this kind. Along with this journal, devoted exclusively to original communications and criticisms, they also regularly issue the following work:—

XXXIII. *Bibliothek der Practischen Heilkunde.* Herausgegeben von C. W. Hufeland und E. Osann.

This Library of Practical Medicine, is filled with critical reviews of new books, analytic extracts, and short literary notices, and appears in monthly numbers containing four sheets. In this publication the editors give the most ample proofs of their critical abilities, which are of a high order, and exercised in a liberal spirit. The most valuable part of the work, perhaps, is the annual scientific survey or review of the condition and progress of medical science during the preceding twelvemonth. This survey is extended to the medical works produced throughout the world, from the largest systematic treatises to the smallest and most fugitive pamphlets and essays. The last of these universal surveys we have received, is that for 1827, and with the titles of the books referred to in the text, it occupies the tenth, eleventh, and twelfth numbers,

(published together,) of Vol. 60. A more complete and satisfactory production of the kind is scarcely to be desired.

In addition to the two preceding periodicals, the same editors publish a third, devoted to Surgery.* This we have never seen; though by a title page belonging to it, attached accidentally to one of the other journals, it has reached the sixty-first volume, or is now rather more than thirty years old, if, as is usual, two volumes appear annually.

For the most interesting articles published in these journals, we must refer readers to our periscope, for whose enrichment in every thing practically useful, new, and improving, the editors regularly make the most strenuous efforts, extending their enquiries and researches to every accessible source, without reference to difficulty or expense. J. D. G.

XXXIV. *Handbuch der Anatomie des menschlichen Körpers, zum Gebrauch der Vorlesungen*, ausgearbeitet von JOHANN CHRISTIAN ROSENMULLER, M. et C. D. Professor der anatomie in Leipzig, &c. &c. Vierte vermehrte Auflage herausgegeben von D. ERNST HEINRICH WEBER, Prof. &c. Leipzig, 1828. 8vo. pp. 564.

This is one of the most excellent "Hand-books" of anatomy we recollect to have examined, and the popularity it has enjoyed in Germany since its first publication is well merited. A new edition has appeared there almost annually since the first; the fourth, enlarged and improved by Professor WEBER, was published last winter. While engaged in teaching anatomy, two years since, the writer was struck with the peculiar fitness of Rosenmuller's Hand-book for students attending lectures, and commenced a translation of it, which would have been published long ago, but for the interruption caused by severe and protracted illness. The reception of the last edition, and a conviction that the service will prove acceptable to a large number of the profession, have induced him to resume his intention of publishing the translation. This, it is expected, will be rendered still more valuable by the addition of a set of graphic illustrations of the muscles, on a plan altogether new in this country. J. D. G.

* The title is rather singular if the opinion we have formed of its age be correct; "Neues Journal der Practischen Arzneikunde und Wundarzneikunde," &c. that is, *new* Journal of Physic and Surgery.

QUARTERLY PERISCOPE.

FOREIGN INTELLIGENCE.

ANATOMY.

1. *Anomalous Muscle.*—Dr. Wedemeyer, in examining the body of a mason, found in the axilla of each side, a muscle stretched across from the tendon of the *latissimus dorsi* to the edge of the *pectoralis major*, and in such a way that during life its contractions must have effectually compressed the axillary artery, and of course occasioned a cessation of the radial pulse.—*Untersuchungen über den kreislauf des Bluts, &c.*

2. *On the Supposed Muscularity of the Larger Arteries.*—Dr. Wedemeyer states, in proof of the larger arteries not possessing muscular fibres, that the true muscular fibre is reddish, soft, extensile during life, and very brittle after death; whereas, on the contrary, the fibrous coat of the arteries is yellowish, firm, hard, and very elastic even after death; that the vasa vasorum do not distribute themselves as in muscular fibre; that it does not contain any fibrin; that it is not excited to contract by galvanism or any other irritant; and that in its extreme liability to the deposition of osseous matter between itself and the inner serous coat, it shows its resemblance to white fibrous tissue in other parts of the body, as well as its distinction from true muscular tissue, between which and serous membranes bony matter is rarely secreted.—*Ibid.*

3. *Anomalous Vertebral Artery.*—M. A. Meckel, of Berne, on opening a dead body, observed a curious case of this kind. There were three vessels on one side: the first, of middling size, arose from the posterior part of the subclavian, where it usually takes its origin; the second, larger in size, arose more deeply from the anterior portion of the same vessel; and the third, which was considerably smaller, was a branch of the inferior thyroid. These three vessels united above the transvere apophyses of the fifth cervical vertebræ, and then formed one vessel, which pursued its usual course to the head.—*Archives Générales, May*, 1829, *from Meckel's Archives*, 1828, *No. II.*

4. *On the Anatomical Structure of the Epiglottis in New-born Children.*—M. Maingault has announced to the Royal Academy of Medicine, that he has observed in new-born children that the epiglottis is not of a size proportional to that of adults. This organ, in the early periods of uterine life, has, he says, the form and dimensions of a very small leaf of myrtle, and imperfectly covers the opening of the glottis—it therefore does not offer the least obstacle to the passage of a sound or tube into the larynx.—*Archives Générales, April*, 1829.

5. *On the Capacity of the Lungs in the Healthy and Diseased State.*—"The statements of physiologists differ materially as to the mean capacity of the lungs. Passing over the earlier experimentalists, we find that, according to the expe-

riments of Jurine, at each natural expiration forty cubic inches are discharged, and by a violent expiration two hundred and twenty inches:—That according to Goodwin, after a complete expiration one hundred and nine cubic inches on an average remain in the lungs, while a natural inspiration introduces only fourteen inches more:—That Menzies procured for each natural inspiration forty cubic inches, for each forced inspiration two hundred inches:—That Abernethy estimates each natural inspiration no higher than twelve inches:—That Kite estimates a natural inspiration at seventeen inches, a forcible inspiration after a forcible expiration at two hundred, and the air remaining in the lungs after a forcible expiration at eighty-seven inches:—That Jurine admits twenty inches, and Delametherie only from four to six as the amount of a natural inspiration:—That according to Sir H. Davy, forty-one inches are contained in the chest after a forcible expiration, one hundred and eighteen after a natural expiration, thirteen more after a natural inspiration, and two hundred and fifty-four after a violent inspiration:—That according to Bostock two hundred and eighty inches are contained after a natural expiration, forty added by a natural inspiration, and if we add ninety more for a forcible inspiration, the lungs will contain four hundred and ten cubic inches:—That Cavallo adopts thirty cubic inches as the amount of air inspired during natural respiration, when this is performed eleven or twelve times in a minute:—And that Abilgaard estimates a natural inspiration so low as three inches. Of these extraordinary discrepancies some must have been produced by errors of observation or faulty instruments of measurement. But it is probable that many of the differences have also depended on differences in the subjects of experiment. Independently of the obvious differences of stature and size of chest, a considerable difference in all probability exists according to the relative rate of the breathing in different individuals, which even in healthy subjects varies from eleven or twelve to twenty-four or even twenty-six in a minute.

"This subject has been lately taken up by Dr. Herbst of Göttingen, who gives a detail of the researches of all his predecessors, and of a numerous set of experiments which he has himself performed, apparently with great care. The instrument he prefers on account of its simplicity and the ease with which it may be managed, is a variety of that employed by Dr. Kentish, being simply a graduated glass bell-jar capable of holding three hundred and sixty-seven cubic inches, (French measure,) standing in a vessel of water, and having at its summit a wide tube and stop-cock, to which was attached a glass tube of the shape of a horizontal S (∞.) When an unpractised person attempted to breathe in an easy manner out of this jar, the gravity of the water which rose into the jar to supply the place of the air withdrawn rendered his inspirations shorter than natural. This was soon made manifest by his requiring to take a long breath after several such inspirations. By practice, however, the various individuals whom Dr. Herbst subjected to experiment easily acquired the power of breathing from the jar exactly as in the open air, so that after many inspirations no uneasiness was felt. Besides the accuracy of the results was always verified by subsequently causing them to make an equal number of expirations into the jar previously filled with water.

"By observing all the requisite precautions, very uniform results were procured under similar circumstances. The quantity of air inhaled during easy breathing was found to be, in unusually short people, from sixteen to eighteen cubic inches, and in those of ordinary stature from twenty to twenty-five inches. Menzies's estimate of forty inches was found to be such as no man could maintain for a short while without effort and uneasiness.

"The extreme capacity of inspiration and expiration differed very much in different individuals. A healthy man, twenty-two years old, five feet ten inches tall, and of moderate strength, after a full expiration, inspired one hundred and eighty-four inches, after a full inspiration expired one hundred and eighty. A delicate young man, nineteen years old, could not inhale more than ninety inches after the fullest expiration. A stout lad of sixteen, and five feet two

inches tall, expired, after a full inspiration, one hundred and sixty inches. A little man, twenty-two years old, and of the same stature, expired one hundred and forty-four inches. A little Jew of the same age, only one hundred and twenty. Fat men had commonly less capacity of lungs than others; two stout, healthy, fat men, one twenty-seven and the other thirty years old, could not exceed one hundred and forty. The greatest capacities which Dr. Herbst had occasion to notice, were two hundred and thirty-two and two hundred and forty-four cubic inches; the former was the expiration of a powerful young man, six feet tall, the latter of a very powerful broad-chested man of middle stature. The effect of tight clothes in diminishing the capacity of inspiration is very striking:—A middle-sized man, twenty years old, after a natural expiration, inspired eighty inches when dressed, one hundred and six when his tight dress was loosened; after a full expiration he inspired one hundred and twenty-six inches dressed, one hundred and eighty-six undressed. Another young man, twenty-one years old, five feet eight inches tall, and of stout make, after a natural expiration inhaled while dressed fifty, when undressed ninety-six inches, and after a full expiration one hundred and thirty in the former case, one hundred and ninety in the latter. In women the capacity of the lungs is much inferior to that of men. A girl eighteen years old, and of middle strength, expired one hundred and six inches after a full inspiration; another, nineteen years old, one hundred and twenty inches, and stout women about thirty expired from one hundred and thirty to one hundred and forty-four. It is probable that after a full, forcible expiration, very little air remains in the lungs. From several experiments made on the bodies of healthy men who had died in consequence of severe injuries, Dr. Herbst found that the lungs, when distended as far as possible without tearing them, never held more than one hundred and eighty-six cubic inches.

"A remarkable fact is, that in proportion to their weight the lower animals have much more capacious lungs than man. The capacity of the lungs in grown up cats is from twenty to twenty-four cubic inches; that of a terrier twelve pounds in weight was thirty-eight inches; that of a mastiff thirty-five pounds in weight, ninety inches. Their relative capacity in different men appears, *cæteris paribus*, to bear a constant ratio to the bodily strength; and this enormous proportional increase in the lower animals is evidently closely connected with the same circumstance.

"In diseases of the chest, the capacity of the lungs is very much diminished. A pretty tall young man, affected for some time with palpitation, difficult breathing, cough, and soreness in the breast, could inspire after an ordinary expiration only thirty, after a full expiration only ninety inches; a man forty-four years old, and of middle stature, who had been long liable to *angina pectoris*, could inhale after a forcible expiration ninety-six inches; a man, thirty-six years of age, who had all the symptoms of confirmed phthisis, could inhale only forty-two inches; a young woman, short in stature, and recovering partially from phthisical symptoms, could inhale forty-six inches after a full expiration, twenty-six after an ordinary expiration."—*Ed. Med. and Surg. Journ. July*, 1829, *from Archiv. für Anatomie und Physiologie, No. I.* 1828.

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6. *Case of Double Uterus and Vagina in the Human Subject.*—On the 14th November, 1827, a woman was brought into the Hôtel Dieu, about sixty-five years of age, named Raley. She had been found on the floor of her room in a state of insensibility, and bathed in blood, which she had vomited. A few hours after her admission to the hospital she expired.

On opening the body, the stomach and the whole intestinal canal were found filled with black coagulated blood, but without any apparent breach of surface. After having carefully examined all the viscera and the vessels, which were quite empty, pale, and colourless, M. Jolly, on looking at the uterus, was surprised at the very small size of that organ. On putting the finger into the vagina, he found a membranous division, which separated that canal into two

equal parts. After examining the attachments of the uterus, which were in all respects natural, he removed the rectum and bladder, together with the genital organs, which he inspected with MM. Dance and Dalmas. The external organs presented no extraordinary appearance; the entrance to the vagina was narrow and smooth, without any traces of ruptured membrane, and divided by a partition into a left and right portion of equal size; the length of the canal was four inches. The portion, half a line in breadth, was formed by the apposition of the mucous membranes; interiorly there was nothing remarkable but the smallness of its transverse diameter. The uterus presented no other remarkable feature exteriorly but its small size; it was not more than eighteen lines across; its upper external edge showed a slight depression, which divided the organ into two cavities; from the middle of this depression a longitudinal groove ran along the whole anterior surface of the uterus and vagina. A lateral section from the neck of the uterus, prolonged along its body, exhibited the one cavity without any communication with the opposite side, both inferiorly and superiorly. The cavity of the neck was very narrow, scarcely admitting an ordinary probe about three or four lines in length, and equally separated by a partition; it terminated by a circular orifice, without any trace of irregularity. This orifice was situated in the centre of the neck, which, embraced by the vagina of that side, formed a projection at the upper part of that canal. The partition which ran along the body and neck of the uterus and vagina had the same organization and thickness as the parietes of the uterus.

At each superior angle of the body of that viscus, at the point where the fallopian tubes ought to be inserted, and instead of them there was found an appendix, a real uterine horn, eighteen or twenty lines in length, cylindrical in shape, as large as the little finger where it was inserted into the uterus, swelling out in the middle, and suddenly becoming fine where it terminated in the fallopian tube.

This horn, placed horizontally at the upper part of the broad ligament, presented an oval-shaped cavity, three lines in diameter, smooth and even like that of the uterus, communicating freely with its cavity, and also communicating freely at its smaller end with that of the follopian tube; its parietes, two lines in thickness, had the same structure as the uterus. Neither the fallopian tube nor the ovaries offered any thing remarkable.—*Lond. Med. Gaz. June* 13, 1829, *from the Journal Hebdomadaire.*

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7. *Description of the Auricular Ganglion.* By Dr. Arnold, of Heidelberg. —The communication existing between the fifth pair, sympathetic nerve, and the organs of the senses, has recently attracted the attention of anatomists. The discovery of the auricular ganglion by Dr. Arnold is extremely interesting in reference to this communication. Dr. Arnold describes the auricular ganglion in man as situated on the internal surface of the third branch of the fifth pair, immediately below the foramen ovale, at the origin of the masseteric, buccinator, and deep temporal nerves, and above the superficial temporal nerve. Its internal surface is covered by the cartilaginous portion of the Eustachian tube, and by the upper part of the circumflexis palati muscle; the middle meningeal artery is immediately behind it; it is of an oval form, and slightly compressed; its antero-posterior diameter varies from two lines to two and a half; its perpendicular from one and a half to two; and its transverse diameter from a quarter to half a line. It is of a grayish-red colour, and very delicate, soft consistence; in the calf, on the contrary, it is gray, and rather dense, the reverse of the spheno-palatine ganglion; a difference which, in a physiological point of view, seems to be of peculiar interest, as these ganglia, apparently, perform analogous functions.

The auricular ganglion is enveloped by a very thin and delicate membrane, which is closely attached to the nervous substance, and which, exteriorly, is surrounded by a reddish cellular tissue, similar to the cellular membrane of the intervertebral ganglion. The pulpy mass of the ganglion itself being very vas-

cular, is transversed by numerous white filaments, of which the greater part coalesce, though not so intimately as in the ganglia of the sympathetic nerve. These filaments are branches of the inferior maxillary nerve, and of a nerve which originates from the ganglion petrosum. A great number of short filaments, originating from the third branch of the fifth pair, connect the ganglion with the latter, and thus correspond with the roots of the ophthalmic ganglion. The vidian nerve, which at first sight appears to originate from the ganglion, runs through it, after having received a slight increase of size. Another very remarkable communication exists between the ganglion and the glosso-pharyngeal nerve, by means of a branch of the ramus jacobii, and another between it and the portio mollis, by means of a branch of the portio dura. The auricular ganglion gives origin to several nervous branches of a very delicate pulpy structure, and reddish colour. The most important of these arises at its upper and posterior part, and, in its course along the inner side of the middle meningeal artery, enters into that portion of the Eustachian tube which contains the tensor tympani muscle, in the substance of which it terminates. Two or three branches originate from the lower posterior portion of the ganglion, and unite with the two roots of the superficial temporal nerve, very likely with that portion which sends branches to the membrana tympani.

There are, consequently, the author observes, four ganglia which belong exclusively to the organs of the senses; the ophthalmic, auricular, spheno-palatine, (nasal,) and maxillary, (lingual,) ganglion, all of which are connected with the sympathetic nerve, the fifth pair, a sensitive nerve, and a nerve of motion; communicating branches of the spheno-palatine ganglion with a motory nerve, and that of the auricular ganglion with the sympathetic, have not as yet been discovered in man; in the calf the author has frequently found them.

As to the auricular ganglion in animals, Dr. Arnold has been able to find it in quadrupeds only.

Dr. A. assigns "to the auricular ganglion the same function relative to the organ of hearing, as the ophthalmic performs with regard to the eye, viz. that of regulating the involuntary motions of the membrana tympani. In the latter, two different kinds of motions must be distinguished; the one, which is entirely mechanical, depends on the vibrations of the air; the other is produced by its muscular apparatus, and consists in a greater or less tension, according to the degree of force with which the vibrations of the air act on the portio mollis,* the excitement of which is, by its communicating branch, conveyed to the portio dura, and thence through the above-described branch to the auricular ganglion and the tensor tympani.

Considering the striking correspondence which, in an anatomical point of view, exists between the nerves of the organs of seeing and hearing, and those of taste and smell, it might be asked, whether the latter possess also any apparatus for controlling the excessive action of external agencies? To this the author answers in the affirmative, and ascribes the above function to the diaphragm, for the organ of smelling, and to the excretory duct of the submaxillary gland, for the organ of taste. Whenever the pituitary membrane of the nose is acted upon very strongly, sneezing is excited by the influence which the spheno-palatine ganglion exercises over the diaphragm, by means of the deep vidian nerve; in an analogous manner the secretion and excretion of the saliva in the submaxillary gland, is augmented by means of the maxillary ganglion, whenever the lingual branch of the fifth pair is over-excited.

8. *On the Structure of the Minute Vessels.*—The observations of Dr. Wedemeyer, confirm those of other physiologists, as to the fact, that the middle or fibrous coat of the arteries become less and less strong and distinct as the ves-

* Fel. Savart has first clearly shown the existence of this kind of motion in the membrana tympani, and demonstrated the accoustical reasons of it.

sels diminish in size; "yet that it may be detected by its whiteness in a transverse section of a vessel whose internal diameter does not exceed a sixth of a line. It disappears in vessels which are too small and too remote to receive the impulse of the heart by pulsations—a new proof of the little connexion subsisting between the arterial pulse and the action of the middle coat of the arteries.—The inner coat also diminishes in strength and thickness along with the fibrous coat. At length both gradually terminate altogether in membraneless canals formed in the substance of the tissues. 'The blood in the finest capillaries,' says Dr. Wedemeyer, 'no longer flows within actual vessels, whose parietes are formed by a membranous substance, distinguished from the adjoining cellular tissue by its texture and compactness, but in simple furrows or canals, whose walls are formed by the surrounding cellular tissue.' This opinion, which he shares with several other late microscopical observers, is founded—on the impossibility of detecting with the microscope any membrane interposed between the parenchyma of the tissues and the blood moving in these extreme capillaries—on the facility with which single globules of blood are seen, while passing through them, to quit the stream and penetrate among the ultimate globules that constitute the surrounding texture—on the rapidity with which the blood is observed to work out for itself a new passage or canal in the tissues—and on the impossibility of the processes of nutrition and absorption being carried on through the coats of vessels.—The smaller arteries receive an increased proportion of nervous twigs as their size diminishes. This is particularly observed in the arteries of the penis and face. The fact now mentioned will alone justify the presumption, that the smaller arteries possess more contractility than their trunks and greater branches."—*Edinburgh Medical and Surgical Journal, July*, 1829.

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9. *On the Termination of the Minute Arteries.*—Dr. Wedemeyer has investigated this subject with great care. "The first mode, concerning which all are agreed, is by their passing immediately into the veins. This intercommunication sometimes takes place with vessels large enough to admit three or more globules of blood abreast; and then the communicating vessels have regular parietes. But by far the greater number of the direct communications between the arteries and veins are effected by means of the extreme capillaries, which have been already described as penetrating the textures in the form of furrows, without any membrane being interposed between the blood and the parenchyma of the tissue. Nowhere, either in the greater or smaller communications between the arteries and veins, can there be seen any openings or pores in the sides or ends of the arteries, by means of which the blood could be extravasated preparatory to its being imbibed by the veins. Neither is there to be seen anywhere a sudden passage of the arterial into the venous streams—an abrupt boundary between the two divisions of the vascular system. The arterial streamlet usually winds through long routes and many turns before it assumes the direction and nature of a venous streamlet. It is seldom that extreme capillaries pass immediately from the larger arterial twigs, or to the larger venous branches. The second mode in which the arteries have been supposed to terminate, is by communication with lymphatic vessels. The arguments which have been adduced in support of this opinion, are that the lymphatic vessels bear a close resemblance to veins in their valves and tunics; that various practised anatomists have succeeded in injecting the lymphatics from the arteries; and that the lymphatics which issue from certain inflamed parts, such as the peritonæum or lungs, or from parts otherwise unnaturally gorged with blood, are often filled with a bloody lymph. Our author does not admit the force of these reasons. The analogy of structure between the lymphatics and veins is but a presumptive argument. The experiment of injecting the lymphatics from arteries has failed in many skilful hands, and has probably succeeded only by rupture of their mutual coats. The presence of red lymph in lymphatics issuing from parts distended with blood, may be easily accounted for, without having recourse to

a direct communication with arterial capillaries, because in such circumstances the fluid which is in excess will pass through the organic pores of all membranes by capillary attraction. He concludes, therefore, that we are not yet acquainted with any termination of the arterial capillaries in lymphatic vessels. Every canal that is seen by the microscope to be in communication with the arterial capillaries transmits the red globules of the blood.—The third mode in which the arteries have been conceived to terminate, is in secreting organs and their excretory vessels. Our author has added nothing to our stock of knowledge on this point. He admits that the passage of the matter of injections from the arteries into the excretory ducts, as well as the frequent discharge of blood by these ducts in certain diseased states of the body, will furnish strong presumption in favour of the alleged communication; at the same time he maintains that the phenomena of sanguinolent secretion may be accounted for from the effects of capillary attraction, or endosmose, without a direct communication between the extreme arteries and extreme secreting vessels.—The fourth mode of termination of the arteries is in vessels or exhaling pores, which transmit only the colourless part of the blood. The existence of this mode of termination, it is well known, has been the subject of much controversy among physiologists. Without the existence of serous vessels, that is of vessels too fine to allow the red globules of the blood to pass through them, it appears impossible to account for the rapid increase of the number of red vessels in the conjunctiva of the eye, when it is irritated, or for the immense multiplicity of red vessels which are exhibited after death, by a successful injection, in a vast number of the organs of the body, which during life exhibit an inconceivably smaller proportion. Dr. Wedemeyer is therefore disposed to attach little importance to the objection which Mascagni and others have brought against their existence, namely, that it is impossible to distinguish any such serous vessels by microscopic observation. Some microscopic observers have indeed alleged that they have seen colourless vessels in great numbers. But Haller, Spallanzani, Mascagni, and more lately Oesterreicher, found that these apparently colourless vessels are capillaries which only admit a single row of globules, and appear, by reason of the small quantity of colouring matter, not red, but yellow. Dr. Wedemeyer confirms the observations of these physiologists; but at the same time adds, that he thinks he has occasionally succeeded in detecting real serous capillaries.

"'The undeniable fact,' says he, 'that the streamlets of blood which consist of a single string of globules, are not red or even materially coloured before the microscope, because the globules singly appear yellow, and acquire a red colour only when collected into masses, will certainly explain many of those experiments, in which it was erroneously thought that serous vessels were seen. But it does not bear us out in the conclusion, that the same explanation is to be given of all the apparently colourless streamlets; more especially as we have hitherto been able to examine the capillary circulation with the microscope only in a very few parts of the body. And, in truth, I have myself often observed in the mesentery of the frog, pretty wide capillary vessels, which were to appearance empty, but which were really filled with serum; since, whenever the heart was cut out, and the blood allowed to drain away, these vessels in great measure collapsed, disappeared, and left as evidence of their existence nothing more than streaks of thickened cellular tissue. That they did in these circumstances discharge serum from their cavities, was owing to the elasticity of their parietes, which pressed their fluid contents towards the quarter where least resistance was encountered. One may accomplish the same thing, and empty them of their serum, by stroking them repeatedly with a hair pencil. These serous canals were actually sometimes too narrow to admit or transmit globules. But others were evidently large enough to admit single globules; and one is therefore naturally led to enquire why these vessels, though destitute of Bichat's *specific irritability*, admit only serum. I have no doubt that the following is the cause of this appearance: at their origin in a capillary containing blood, or

in some part of their own course, for example, at a point where an abrupt turn is made, they are too often, as I have witnessed, plugged up or narrowed by stagnating globules, or coagulated blood; so that when so circumstanced they transmit only the more fluid serum, especially when the force of the heart is weakened, and its impulse does not in consequence act everywhere with sufficient power. Hence when the lost power of the heart is compensated by gently stroking the part with a hair-pencil, and the stagnant globules are impelled onwards, the circulation is restored, more globules follow, and the vessel continues for some time at least to convey red blood.'

"With regard to exhalant pores for the discharge of the serous part of the blood, Dr. Wedemeyer conceives their existence cannot well be denied. But he objects to the supposition that these pores are visible, *organic*, or, as he explains the term, endowed with a species of contractility, by means of which they retain certain substances, and discharge others. He maintains, that if any such pores existed, they would be perceptible with the aid of the microscope; and he considers that all the phenomena of exhalation may be produced through invisible pores, or the interstices between the ultimate particles which form the organic tissues, and may be explained by the phenomena of capillary attraction as modified by the action of the nervous system on the textures. In these views he approaches closely to the theory which M. Dutrochet has founded on his discoveries on endosmose and exosmose."—*Ibid.*

PHYSIOLOGY.

10. *Mechanism of Vomiting.*—M. Hediard, relates in the *Nouvelle Bibliothèque Médicale* for May last, a case of complete disorganization of all the membranes of the stomach, *the muscular fibres had entirely disappeared.* Yet in this instance there was vomiting, which occurred until death. This case is interesting as contradicting the conclusion of M. Isidore Bourdon, who from an analogous case, in which there was no vomiting, concluded principally from that fact, that the stomach was always active in the action of vomiting.

11. *Anatomical and Physiological Researches on Emphysema of the Lungs.*—Pathologists in examining bodies after death have been accustomed to suppose that the lungs are in a healthy state, when they crepitate on being handled, and the air-cells are regular and not of unusual size. M. Piedagnel, in a paper contained in Magendie's Journal, undertakes to prove on the contrary, that the lungs are never healthy when they crepitate; that they never crepitate except when affected with general or partial emphysema; and consequently that emphysema of the lungs is an exceedingly common disorder, being in fact produced at the close of very many diseases by the dying efforts of the patient to maintain respiration. If, says he, the chest of a dog that has recently died without making violent respiratory efforts be opened, the lungs contract very much, and when taken out and handled or cut, they feel soft, flaccid, and totally destitute of crepitation. If again the same experiment be made on the chest of an infant that has only lived a few hours, and the lungs are gently and not too much inflated, they contract in like manner to a great extent, and do not crepitate when squeezed between the fingers. Or if the experiment be tried with the lungs of an adult who has died without a concluding stage of agony, and not of a disease of the organs of respiration, it will likewise be found that the contracted lung is soft, more or less flaccid, destitute of crepitation when gently pressed or when cut into. Such then, he concludes, must be the natural condition of the lungs. But if the lungs of an animal, a child, or an adult, such as we have described, be inflated artificially with considerable force, they do not afterwards sink so completely, they are much more elastic, and they crepitate when handled or cut. Since crepitation does not exist in their natu-

ral state, and may thus be produced at will, it must always be a morbid phenomenon when it takes place spontaneously. And on considering the circumstances under which it is produced, we must come, continues M. Piedagnel to the conclusion, that it arises from the rupture of the air-cells and the passage of air into the cellular tissue between them. In the dead lung crepitation is caused by forcible distention from the trachea, and also very effectually by blowing air into a hole in the pleura; the obvious effect of which must be to distend the cellular tissue. Accordingly in the frog, in which the air-cells are large and the cellular tissue very scanty, the lungs cannot be made to crepitate by artificial distention. Towards the close of life it is caused by every form of disease which terminates in laborious breathing. Hence it is met with in all cases of violent and prolonged death, in every acute disease which terminates in long and painful agony, and in all affections of the lungs or brain, which cause obstruction of the breathing. In such circumstances it will be remarked, that respiration consists in a sudden deep inspiration followed by closure of the glottis, and a gradual expiration, during which, in consequence of the difficulty the air experiences in passing through the glottis, it is subjected to pressure on the lungs. On the contrary, the lungs are seldom found to crepitate in chronic diseases, which have had a long course, and brought the patient by insensible steps to the tomb. In particular they seldom crepitate after death from cancerous affections of the abdomen.

Since emphysema then, is a derangement of structure so common and so easily produced in the last moments of existence, may it not also arise, adds the author, in other circumstances where its immediate cause is less evident? And may we not thus explain many of the alleged cases of sudden death, which happen not unfrequently in hospitals, without any morbid appearance being detected in the dead body to account for it? The two following examples are quoted in confirmation of this conjecture. A man, thirty-six years of age, and of sound constitution, was admitted into the hospital of St. Antoine, on account of pains in the abdomen and slight pulmonary catarrh consequent on suppression of a hæmorrhoidal discharge. After being a few days in the hospital he was getting the better of his trifling ailments, when he began to complain of obstructed breathing, and a sense of weight in the epigastrium, which prevented him from taking a full breath. As his pulse was frequent, venesection was ordered; but before it could be performed, he died. On examining the body, the inspector could find no diseased appearance worthy of note, except that the lungs were voluminous, filled the whole chest, and crepitated strongly. Another man, sixty-one years of age, and in general healthy, but liable for three years before to occasional pulmonary catarrh, was admitted into the same hospital on account of violent cough with copious mucous expectoration, and mucous rale; but his breathing was natural. Three days after his admission he also complained of impeded respiration; and next morning he was found dead in bed. When the body was examined it was considered that every organ, and among the rest the lungs, were sound. The lungs, however, says M. Piedagnel, were crepitating, and full of air, filled completely both sides of the chest, and on the left side were indented by the ribs, whence he had no difficulty in concluding that the patient had died from the sudden infiltration of air into the pulmonary cellular tissue.

Another practical inference which may be drawn from his researches is, that in supporting the breathing by artificial inflation of the lungs, care must be taken not to inflate the chest with too great force. This caution was suggested not long ago by M. Leroy d'Etiolle, in consequence of experiments on living animals of a nature parallel with those performed by M. Piedagnel after death. But it may nevertheless be useful to see what the latter enquirer has to say on the subject. He informs us that in 1826 he delivered a lady of a still-born child, which he endeavoured to bring to life by artificial inflation of the lungs, but without avail. On examining the body he could not discover any obvious cause of death, but the lungs were strongly emphysematous. He was therefore

led to conceive that the emphysema had been caused by the inflation, and that thus a fresh cause of death had been unwarily added to that which already existed. On subsequently making some experiments on living animals he arrived at the same results as M. Leroy d'Etiolle. Sudden inflation caused immediate embarrassment of the respiration, proving speedily fatal; and he found in the dead body the lungs pale and emphysematous.

He further remarks, that pulmonary emphysema has appeared to him to be the cause of death in those extraordinary cases of sudden death, which have taken place during operations at the root of the neck, from the passage of air into the veins. In two melancholy instances which happened at Paris of sudden death from that cause, during the removal of a firm cellulo-fibrous tumour from the neighbourhood of the clavicle, one of which has been recorded in Magendie's Journal, Vol. 1st, and the other in the 3d vol. of the *Archives Générales de Médecine*, M. Piedagnel says the most striking appearance was emphysema of the lungs marked by crepitation and the want of subsidence of the lungs. Death in such cases has been usually ascribed to the air entering the heart in such quantity as to deprive that organ of a due quantity of its proper stimulus; by others it has been ascribed to the air entering the brain in the arterial blood; but the author appears to us to give a more satisfactory explanation of the accident.

He is disposed to dissent from Laennec as to the possibility of mere dilatation of the air-cells of the lungs being accompanied with the symptoms of emphysema, and maintains that such a state of the lungs has been found in the bodies of persons who did not labour under any impediment of the breathing, and that in those who have had such symptoms there is always found, besides enlargement of air-cells, effusion of air into the cellular tissue around them, the effect, he supposes, of rupture of the air-cells at the time the breathing first becomes materially disturbed.—*Edinburgh Medical and Surgical Journal, July*, 1829.

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12. *On the Supposed Irritability and Vital Contractility of the Arteries.* By George Wedemeyer, M. D.—No fibre unequivocally muscular is insensible to the stimulus of galvanism. The heart, it has been asserted, however, is not affected by it; but the experiments of Dr. Wedemeyer entirely disprove this exception; the contractions produced in it by galvanism are so distinct, that he says it is inconceivable how the experiment on frequent repetition should have appeared to any one to yield a negative result. On the contrary, his experiments on the greater arteries, carried on for a series of years, and repeatedly performed on dogs, cats, rabbits, Guinea pigs, hedge-hogs, birds, frogs, mewts, serpents, and fishes, never furnished a result contrary to the opinion, that these vessels do not possess irritability or vital contractility. The experiments were made with a battery of fifty pairs of plates on the carotid artery, and thoracic and abdominal aorta, sometimes during life, sometimes immediately after death, caused in all manner of ways, and the artery was sometimes left in connexion with the heart, sometimes was removed from the body; but the result was always the same; he never could mark any contraction. As little could he succeed in producing contraction by mechanical stimulants. The exceptions to this general fact, which have occurred to other experimentalists, he has found to be more apparent than real.

"The final result of his researches on the present topic is, that in the natural state of the pulsation of the arteries no such contraction is ever witnessed, as that observed by Hastings on the application of stimuli, or by Hunter and others on the evacuation of the blood—that Bichat and Parry are correct in stating that a slight augmentation of the diameter of the arteries is caused at each pulsation, but that it is so small as to be with difficulty appreciated—that all the phenomena of the arterial pulse may be imitated exactly, when life has been for many hours extinct, by impelling water into the vessels by successive jets from a syringe—that the pulse is owing entirely to the impulse communicated

by the heart, in consequence of which the artery is partly dilated, and partly made to shift its place—that all the phenomena of the arterial circulation may be referred to the elastic contractility of the coats—and that the greater arteries therefore contribute to move the blood forward only by restoring through their elastic reaction the force expended in dilating them."—*Edinburgh Medical and Surgical Journal, July*, 1829.

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13. *Influence of the age of the Parents on the Sex of their Offspring.*—Professor Hofnacker, of Inspruck, relates in the *Inspruck Med. Chir. Zeitung*, the following interesting researches on this subject:—

1. In marriages where the mother is older than the father, the average number of male to that of female births is 90.6 : 100.

2. Both parents being of the same age, the proportion of boys to girls is 92 : 100.

3. The father being from three to six years older than the mother, the number of male to that of female children is 103.4 : 100.

4. Where the father is from six to nine years older than the mother, the proportion is 124.7 boys to 100 girls.

5. The age of the father being from nine to twelve more than that of the mother, the proportion is 143.7 : 100.

6. Where the age of the father is eighteen years and more above that of the mother, the proportion of male to female births is 200 : 100.

7. Young men, (from twenty-four to thirty-six,) produce with young women, (from fourteen to twenty-six,) 116.6 boys to 100 girls.

8. If men between the age of twenty-four and thirty-six, are married to females between thirty-six and forty-six, the proportion of male to female children is 95.4 : 100.

9. Middle-aged men, (from thirty-six to forty-eight years,) being married to young females, the proportion of their male and female children is 176.9 : 100.

10. Middle-aged men, and middle-aged women, produce 114.3 male to 100 female children.

11. Middle-aged men, being married to women of a more advanced age, the proportion of male to female children, is 109.2 : 100.

12. Old men and middle-aged women produce 190 male to 100 female children.

13. If husband and wife are both equally advanced in age, the proportion of their male and female children is 164.3 : 100.—*Nouv. Biblioth. Méd. July*, 1829.

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14. *Gestation prolonged beyond the Ninth Month.*—Dr. Albert of Wiesentheid has published in the *Zeitschrift fur die staatsarzheykunde*, III. tes 1828, an account of two cases of this kind. In one gestation was prolonged forty-three, and in the other, thirty-three days beyond the ordinary period.—*Archives Générales, June*, 1829.

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15. *Experiments on Endosmose and Exosmose.* By G. Wedemeyer, M. D.—We have on several occasions noticed the interesting experiments by Dr. Dutrochet, on the property of animal tissues, and, as we believe, they are destined to lead to new views respecting some physiological phenomena, we are happy to be enabled to present to our readers the following experiments, confirming and illustrating the general doctrines established by M. Dutrochet.

"If a wide glass tube filled with water, and closed at its lower end with some animal membrane, be plunged into a vessel containing a mineral acid, the water will penetrate the membrane by virtue of a superior capillary attraction for it, and at its outer surface unites continually with the acid by chemical affinity; so that gradually the whole water passes out of the tube, and mixes with the acid, while the tube is thus emptied. If, on the contrary, the acid be poured into the tube, and the water into the outer vessel, the water penetrates through the membrane, and unites with the acid in the tube, so that the latter gradu-

ally rises, and at length flows out at the top of the tube. If instead of an animal membrane a vegetable one be substituted, no such phenomena occur.

"Mr. Brande made also the following experiment, of the accuracy of which I have since satisfied myself. If the end of a glass tube five lines in diameter be hermetically closed by the swimming-bladder of a fish, placed in a vessel of water, and filled to the level of an inch above the surrounding water with blood deprived of its fibrin, the bladder, owing to its stronger capillary attraction for the water, is penetrated by that fluid. The water, in consequence of chemical affinity, unites with the blood as fast as it passes through the bladder; so that at length the blood, now converted into a bloody water, will rise several inches in two days, or a little more, and flow out at its upper opening. A few hours after this process has commenced, and when the blood has undergone solution in the water which has passed through, and appears a dark but translucent liquid, a slight capillary attraction begins to be manifested between the bladder and this solution of the blood, a stream is established in an opposite direction to the former, though much more feeble, so that at last the water in the outer vessel is reddened slightly by the transmitted colouring matter of the blood.

"If, on the other hand, the tube filled with blood is placed in a vessel containing a solution of salt, no passage of the solution will take place towards the blood through the swimming bladder, there will be no solution of the colouring particles of the blood, no change of its colour, no rise in the tube, and the solution will undergo only a very faint alteration of colour, after a long interval.

"These experiments show that an animal membrane exerts its capillary attraction variously on various liquids, that it attracts water more strongly than blood, and that blood strongly attracts water, since so distinct a rise and flowing over of the fluid in the tube can be ascribed only to such an attraction, and by no means to the capillary attraction of a tube so large as five lines in diameter. Is there not a striking resemblance between the phenomena now described, and the phenomena of absorption in the living animal body? May it not be by powers similar to this that the motion of the blood and other fluids is effected in animals which have no heart?"—*Edinburgh Medical and Surgical Journal, July*, 1829, *from Untersuchungen über der Kreislauf des Bluts, &c.*

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16. *Vaccine Disease Transmitted from the Mother to the Fœtus.*—An instance of this kind is given in the *Journal des Progrès*, Vol. XV. from a Swedish journal. The Academy of Sciences of Stockholm, it appears, took some pains to ascertain the facts of the case, and if the report made to them can be depended upon, it affords one of the strongest proofs hitherto adduced that virus may be transmitted from the mother to her fœtus. The following are the most important facts of the case. A peasant, aged twenty-one, pregnant for the first time, was vaccinated, April 3d, 1803. On the 13th of the same month, the disease was fully developed, and in the evening the mother was delivered of a healthy daughter. The infant was fed upon fresh cow's milk, and grew finely. In the mean time it was observed that the child had upon its arms, regular vaccine vesicles, in the same spots and of the same number as the mother. These vesicles arrived at maturity, left cicatrices, and were in all respects similar to those of the mother. The child did well for six weeks, when it died of an accidental affection of the stomach and breast, after three days sickness.

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17. *Communication between the Uterine and Placental Vessels.*—Dr. Biancini published last year in the *Antologia Giorn. di so.* &c. some experiments which he had made, to prove that there exists a direct and immediate circulation between the mother and fœtus. He injected the vascular system of a woman who died in childbed, from inertia of the uterus, the placenta being still attached to the uterus; he found the injection in the vessels of the chorion and of the amnios, and on examining the tortuous arteries of the uterus, he observed that they pe-

netrated the tissue of the placenta, that they spread themselves over these vessels, and that they had deposited the injection in the cells described by Hunter and Meckel. In a young woman who died eight days after delivery, and in whom a small portion of the placenta still adhered to the uterus, the injection introduced into the uterine arteries, not only passed from the uterus into the adherent portion of the placenta, but also spread itself in the cavities of the uterus and vagina, through the lacerated extremities of the vessels which Dr. B. names *utero-placental arteries*. On dissection, the vessels of the uterus and placenta were found filled with the injection. In a woman who died in childbed from metrorrhagia, the injection introduced by the aorta, exhibited the tortuous arteries continuous with those of the uterus, and which, by their free and open extremities, had permitted the injection to transude on the internal surface of the uterus. It was, Dr. B. thinks, by these utero-placental vessels, that the fluid in the first experiments passed from the uterus into the placenta. These vessels, according to Dr. B., M. Lauth, Junr. has improperly named lymphatics.

These experiments have given rise to much controversy in Italy. Among others, Dr. Rigalli has opposed to them some anatomico-physiological observations, founded upon a great number of experiments made by him in 1819 and subsequently, upon a woman and the females of different species of animals. In the greater number of cases, the injection of the vessels of the uterus did not pass into those of the placenta; if in some cases the injection did pass into the placental vessels, the experimenter is convinced that this happened either from the rupture of the vessels, or by absorption, which function it is known goes on some time after death. In fact, if the passage into the placenta, of fluids injected by the uterus, occurs when the experiment is made immediately or very shortly after death, it never takes place when the experiment is tried a sufficient time after death for all vitality to be extinct, and absorption to have ceased. Dr. Rigalli is therefore convinced, that the apparent results obtained by Dr. Biancini, were the effects either of absorption, a pathological condition, or rupture of the vessels, and denies that they at all prove, the connexion between the uterine and placental vessels, or the direct communication between the mother and fœtus.

On the other side, M. Daliso Casabianca has sent to the Medico-Physical Society of Florence a memoir on this subject, in which he says, that, assisted by M. Vinciguerra, and in presence of the most celebrated professors of anatomy and physiology of the University of Pisa, he has made eleven experiments upon animals, in which mercury injected by the arteries of the mother, passed into the veins of the fœtus, and vice versa, without its being possible in this double passage to discover any extravasation of the injection in the intermediate tissue. He concludes, 1st, that the fluids injected by the arteries of the mother passed into the umbilical vein of the fœtus; 2d, that the same fluids introduced by the uterine veins flowed into the umbilical arteries; 3d, that these fluids have a free circulation from the mother to the fœtus, and from the fœtus to the mother, by two series of vessels, described by M. Biancini under the name of *utero-placental arteries* and *placento-uterine veins*.

As connected with this enquiry, we refer the reader to the interesting experiments of Professor Mussey, in the original department of this number. The question of the communication between the mother and fœtus would form an excellent subject for an experimental investigation, and we hope that some enterprising candidate for medical honours will select it for his inaugural dissertation.—*Journal des Progrès, Vol. VIII. and XIV.*

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18. *Case in which the Summit of the Bladder was Deficient.*—M. Nespoli informed the Medico-physical Society of Florence, that in examining the body of a woman, he found the upper portion of the bladder wanting, there being only an inferior portion disposed in the form of a basin, in which the ureters and urethra terminated. The deficient part of the bladder was replaced by the ad-

hesion of the sigmoid flexure of the colon with the cœcum, and this woman retained her urine perfectly well, and passed it at pleasure.—*Annali Universali di Medicina, Milano, Nov. & Dec.* 1828.

PATHOLOGY.

19. *Affection of the Mind from Injury of the Brain.* By JOHN EPPS, M. D.—It has been pretty generally urged against the truth of phrenology, that injuries of the brain, have taken place, without any affection of the mind. As the brain is acknowledged by all, to be the seat of the mind, there is much reason to doubt this assertion, and to believe that it has been too hastily made, and received without sufficient investigation. Dr. Epps presents us in the *London Medical and Surgical Journal* for June last, an account of a case, which supports this view of the subject.

"An individual, when a boy, was playing with a horse, and he received a blow on his head, which fractured his skull, and occasioned some of the brain to be lost and removed. He survived the blow, and has now attained to manhood; is engaged in business, and has, from his engagements, considerable exercise of mind. The part of the brain lost is situated at the organs of causality, wit, ideality, and constructiveness. He has a developed head, and is a man of common sense. From the statement hitherto made it might be imagined that his mental powers are not at all affected; but now to the matter of fact. This gentleman is subject to what are commonly called fits. He falls down suddenly, and is generally relieved by bleeding, either spontaneous, or excited by art. What is peculiar is, that these fits come on when his mind is much harassed by occupation, and by making arrangements and perfecting plans. When his mind is thus employed a peculiar sensation is experienced, which warns him to direct his thoughts to other objects; the attempt is made, and, if successfully, the fit does not occur. The phrenological physiologist explains this by the circumstances that causality, constructiveness, and ideality, are in an injured state, (the new bone, it should be observed, is but imperfectly formed, and sinks in;) that, when these faculties are in great activity, a flow of blood takes place to the parts; the organs of these faculties, which not being in their natural state, and partly from the unnatural sunken position of the bone, are thereby morbidly affected, and the fit takes place. But if the sufferer can turn his mind to other objects, that is, excite other faculties, the blood immediately takes its direction to the organs of these faculties, and is thus diverted from its former course. This gentleman's memory, too, fails him very much; and he is at present quite a young man.

"Here, then, we see the mind to be affected when the brain has been injured, while all other functions of the body are in a healthy condition."

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20. *Case of Extraordinary Growth.*—This case is recorded by Dr. BEDOR, in *La Clinique.* It occurred in a young man who had symptoms denoting organic disease of the heart; and, who in twenty-five days increased in statue three inches. The patient died suddenly a few days after he was seen by Dr. Bedor. He was scarcely nineteen years of age, and had attained the unusual growth of six feet three inches.

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21. *Remarkable Predisposition to Hæmorrhage.*—Dr. SCHREYER of Vogtsberg, states that, in a family of five children, under his observation, the eldest bit his tongue, and bled to death; the second and fourth are perfectly healthy; but the third and fifth have a remarkable tendency to hæmorrhage. All these are of the male sex. The two above mentioned, one aged five years and the other fifteen months, have, at irregular periods, blue spots on the legs and thighs, which increase till they become as large as a pigeon's egg, when they assume

a greenish blue colour: they do not bleed unless they are punctured; but, if this be done, the hæmorrhage does not cease till the child faints, and the body is blanched. The blood which flows first is red, but after a time it becomes pale, like water in which flesh has been washed. Pressure with the point of the finger, kept up for twenty-four hours, is sufficient, according to the testimony of the parents, to stop the bleeding. No coagulum ever forms, to plug up the vessels. Neither of the parents, nor their relatives, participate in this morbid condition; and it is remarkable that it has affected their children alternately, viz. the first, third, and fifth.—*Zeitschr. für Natur. und Heilkunde.*

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22. *Gonorrhœa and Chancre.*—We learn from a communication by M. Gibert in the *Nouvelle Bibliothèque Medicale*, for March last, that M. Biett had under his care a man who was afflicted with gonorrhœa, caused by cohabiting with his wife shortly after delivery, and during the continuance of the lochial discharge. The gonorrhœa being suppressed in a great part, an acute purulent ophthalmia supervened. We learn from the same source, that there was in the hospital of St. Louis a patient, with a large ulcer on the internal surface of the prepuce, and at the base of the gland, caused by having connexion with a woman a few days after her delivery.

These cases are conclusive, as showing the non-specific nature of these diseases. We have known gonorrhœa several times induced by cohabiting with a woman during or two soon after menstruating; and chancres and also gonorrhœa produced by the leucorrhœal discharge.

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23. *Disease of the Frontal Sinus.*—A delicate girl, nine years old, after having an itch suppressed, was affected with severe head-ache, and a swelling was observed in the left eye-brow, which was gradually followed by impairment of the sight in that eye. From this period her system underwent so little change, that when she had attained her fourteenth year, she might readily have been mistaken for a child of twelve. At this time she was first examined by Professor Jäger of Vienna, who found that the hard tumour, if dented in by pressing upon it with the finger, when the pressure was removed, would regain its former dimensions with an elastic spring similar to a metallic plate. Except this tumour, and occasionally recurring head-aches, there were no particular appearances of disease. It was concluded that the disease was situated within the frontal sinus, but by no means certain that it did not affect the internal table of the os frontis. The thin external bony plate was cut through, and a large quantity of bloody serum was discharged, and the cavity of the sinus appeared to be divided into numerous cells by delicate membranes; as it was probable that the dura mater would be injured by removing the inner table of the frontal bone, it was not disturbed. Such high inflammation of the wound ensued, and other symptoms of high reaction, as to require a decisive antiphlogistic treatment; this, with the continued discharge of bad-smelling serum, and the increasing weakness of the patient, soon required the use of the cordial plan. The discharge ceased, and the opening healed under the use of the usual remedies, the tumour remaining as large as before. The patient remained for some months in the condition she had been in previous to the operation, suffering frequent attacks of head-ache, and finally became chlorotic. The swelling was not reduced by the passage of a seton through it, but daily poured out a large quantity of fetid fluid. She retained her entire consciousness, and her left eye, notwithstanding the great compression of the optic nerve, recovered its sight; about eight days before her death a severe inflammation of its cornea occurred. She died hectic in her fifteenth year; how soon after the operation is not stated.

The following were the dimensions of the swelling; length five inches eight lines, breadth four inches nine lines, height four inches three lines. The tumour had encroached so far as to narrow the left nostril and compress the antrum maxillare of that side; posteriorly it had forced the brain from its natural position, causing the anterior to occupy the place of the middle lobe, and the dis-

placement of the entire left half of the brain as far back as the optic thalamus, was very remarkable. In general the inner table of the skull was not perforated, neither was there any remarkable affection of the dura mater, with the exception of a high degree of vascularity. When the tumour was laid open, the cavity was found to contain numerous cysts, [hydatids?] some containing reddish, others bluish or colourless gluey serum. The extended bony plate was of a consistence similar to the skull of a newly-born hydrocephalic infant. The cysts were more like the tunica hyaloidea than any other substance; some held nearly a drachm, others an ounce or two of fluid. Some of the smallest were insulated, the larger communicated with each other by small lateral openings.—*E. Dissert. Inaug. J. Gul.* Brunn, *Anhalt. in Hecker's Annalen der gesammten Heilkunde, March*, 1829. J. D. G.

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24. *On Hypertrophy of the Brain.*—M. Mc. Laennec has published in the *Revue Medicale*, for December, 1828, several cases, which he considers examples of a peculiar disease of the brain, not unfrequently associated with other diseases of that organ, but may likewise exist, as a single independent affection. The following are the conclusions that he has drawn from his enquiries:—1st. That the brain, like every other organ, is susceptible of an obvious augmentation in volume and density, or in other words of a true *hypertrophy*. 2d. That the anatomical characters of this hypertrophy consist in very great firmness of the cerebral substance, and a marked flattening of the convolutions of the brain, which flattening coincides with complete or almost complete emptiness of the ventricles, and sometimes with notable contraction of these cavities. 3d. That this change of structure is constantly conjoined with epileptic, or at least epileptiform symptoms. 4th. That it developes itself with much greater rapidity than any other hypertrophy; a circumstance which makes it approximate to the inflammatory congestions, and appears to depend on the organization of the texture in which it is seated. 5th. And that the causes of the lead-cholic appear to have a very great influence in developing hypertrophy of the brain.

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25. *Fœtus affected with Fungous Hæmatodes.*—Dr. Tonnelle delivered a woman of a child, which had upon its right parietal bone an enormous fungous hæmatodes. The base of this tumour originated in the osseous tissue, and perforated it like a sieve; the dura mater was healthy.—*Journal des Progrès, Vol. XIV.*

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26. *Periodical Hemicrania, terminating by the evacuation of a Calculus through the Nose.* By Dr. Axmann.—A female, aged fifteen, complained of pain in the region of the left and frontal sinus, which extended to the same side of the head. It recurred daily, at ten, A. M. and continued to five, P. M. Sometimes the pain was excessive, affecting the left side of the face, and inducing tumefaction around the eye. The left nostril was dry. During the paroxysms, the girl suffered from nausea and vomiting. The disease continued two or three weeks, and recurred all the year, except January and February. Menstruation appeared in the seventeenth year. She married at twenty-one, and during her pregnancy the disease disappeared. During fifteen years she bore eight children, and generally enjoyed good health, except at the end of the third pregnancy, when head-ache was violent. Three years from her last delivery, the menses diminished, and in March, 1823, the head-ache returned with violence. In the summer, she visited the baths at Kissengen and derived much benefit. In March, 1825, she was consoled by the passage of a calculus from the left nostril, of the size of a bean, and this was effected by a pinch of snuff. During the succeeding months and the following year she evacuated several calculi, which were followed by a discharge of fetid pus, and this effect was produced by sternutatories. Since 1826 the woman is perfectly well. The calculi were analyzed by M. Geiger, and found to consist of albumen, mucilage, and fibrin:

fat and osmazome, in the proportion of 0.35; phosphate of lime 0.8; carb. of lime 0.325; carb. magnesia 0.125; and traces of soda, muriate of soda, and oxide of iron.—*Archives Générales, May*, 1829, *from the Heidelberger Klinische Annalen.*

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27. *Case of disease of the Eye supposed to be produced by Inflammation of the Jugular Vein.* By James M. Arnott, Esq.—"A young man had a ligature placed on the left carotid artery, for an aneurismal disease of one of its temporal branches. Considerable difficulty was experienced in passing the needle round the vessel. Venous hæmorrhage took place during the operation, recurred at night, and occasionally afterwards for nine or ten days. On the fifth day after the operation, the patient had a severe rigor, succeeded by heat of skin, and general febrile symptoms. These increased, the pulse rose to 120, and the constitutional disturbance assumed a very violent character. About the tenth day, the vision of the left eye became impaired, and was quickly lost, the pupil was contracted, the iris immoveable, and the cornea had a somewhat hazy appearance: effusion took place under the conjunctiva, and the eyelids were greatly swollen, giving the appearance of the globe being much protruded; at the same time, there was a degree of deafness, considerable stupor, with occasional slight delirium. In the course of a few days, the coats of the eye sloughed at the upper part, and its contents were evacuated. Whilst these changes were occurring in the eye, collections of matter formed without pain in different parts of the body, on both shoulders above the insertion of the deltoid muscles, over the sacrum, &c. The constitutional disturbance abated, the collapsed eye healed over, but he never recovered his health. Five months subsequently he died, labouring under lumbar abscess, and worn out by hectic. On examination of the body, (at which I was present,) a portion of the jugular vein, to the extent of two inches, was found wanting; the upper and under extremities being shrunk, ligamentous, and gradually lost in the cellular substance. On opening the head, pus was found effused in great quantity between the tunica arachnoidea and pia mater, along the base of the brain, and the whole length of the spinal cord. The intermuscular cellular substance of the loins was loaded with pus. The viscera of the abdomen and chest were not examined.

"When we consider the circumstances of this case, the venous hæmorrhage, the constitutional disturbance, the formation of abscesses, and the appearances presented on dissection, and compare them with the consequences which have been observed to follow inflammation and suppuration of a vein, can it be doubted that the affection of the eye in this instance, arose from the inflammation of the jugular vein, and from the entrance of an inflammatory secretion, probably pus, into the blood?"—*Medico-Chirurgical Transactions, Vol. XV. Part I.*

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28. *Case of Intermittent Tetanus.* By Dr. Schuette.—A woman, sixty-seven years of age, was affected with whitlow on the thumb of the right hand: the first phalanx being detached, the wound healed; a fortnight afterwards a pricking pain was felt in the lower part of the cicatrix, which extended little by little to the whole arm, following the course of the median nerve: this pain lasted from five minutes to a quarter of an hour, and returned once every day. After the lapse of a few months, trismus and opisthotonos were added to the other symptoms. The thumb was amputated, and the disease did not reappear. On examining the amputated part, it was observed that the cicatrix was cartilaginous, and that a nervous twig that was imbedded in it was of a deep red colour for the extent of a line and a half.—*Heidelberger Klinische Annalen, Vol. III. No. 3.*

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29. *Curious Case of Ischuria.* By Dr. Hastings. In our first volume we published an account by Dr. Arnold, of one of the most extraordinary cases of Ischuria on record, also a very remarkable one by Dr. Senter; the following is related by Dr. Hastings in the fourth number of the *Midland Medical and Sur-*

gical Reporter, and is not only interesting in itself, but also from its analogy to the cases to which we have alluded. A female aged twenty-three, was admitted into the Worcester Infirmary April 9th, 1814. "She represented herself as having been particularly healthy. Within the last week she had been exposed to cold, whilst the catamenia were flowing abundantly. For the first day or two, she only appeared to suffer from feverish symptoms. Soon afterwards, however, the secretion of urine became very deficient, and she had difficulty in passing it.

"On the evening of her admission she became much worse, and complained especially of pain and tenderness over the whole of the lower part of the abdomen, and in the loins. There was vomiting and a disposition to convulsion. The lower part of the abdomen was much distended. The catheter was introduced, and ten ounces of urine were drawn off; after which the pain was relieved. She was ordered to take a scruple of cathartic extract immediately; and one drachm of sulphate of magnesia, dissolved in camphor mixture, three times a day.

"The next morning the bowels had not been moved. She was afflicted with severe head-ache, as well as the abdominal pains. She had passed no water, and was delirious during the night.

"She was cupped on the back, and had a blister applied, and took cathartic mixture every four hours till the bowels were moved freely; after which she went into a warm bath.

"The symptoms remained for several days very much in the same state. Delirium usually came on during the night. No urine was passed by the natural effort, but about three ounces were drawn off by the catheter, in the course of twenty-four hours. She very frequently vomited, and suffered much from pain, tenderness, and tension of the lower part of the abdomen. On the evening of the 17th, insensibility came on, for which a blister was applied to the back of the neck. The pulse was 60. An active aperient was given. On the 19th, no improvement had taken place, for the vomiting was incessant, and the pain in the abdomen and back was more severe. Pulse 80. She was bled three days in succession, with some alleviation of the pain, but the abdomen became generally enlarged and very tender. There also ceased to be any urine drawn from the bladder by the catheter. This continued to be the case for five days. The bowels were open. She took saline diuretics without avail.

"On the 25th, there was much vomiting, pain, and distention of the abdomen, but she passed a little urine. Pulse 80. She was bled to eight ounces.

"On the 27th, a bloody discharge appeared at the umbilicus, after which, the abdominal pain and tension were relieved. She also passed some urine by the urethra. The vomiting was, however, worse than it had previously been.

"The bloody discharge from the umbilicus, and the other symptoms, continued very much the same till the second of May, when there was a discharge of a urinous appearance and smell, from the umbilicus. She had passed no urine by the urethra for three days. The head was very painful; the pupils dilated; pulse 56; bowels costive. Some leeches were applied to the temples, and a blister to the back of the neck. A brisk purge was administered. The catheter was introduced, but no urine found in the bladder.

"This discharge of urine from the umbilicus, continued till the 5th, when the catamenia appeared, but quickly vanished. The abdomen became less tense and tender. There was not so much vomiting. The bowels were open.

"From the 7th, to the 9th, there was no discharge of urine from the umbilicus, nor was there any passed by the urethra. As a consequence, the abdomen became much distended, and severe pain followed, with vomiting. The tension was most remarkable at the umbilicus, forming a circumscribed tumour.

"On the 10th, in the morning, six ounces of urine were drawn off by the catheter; and in an hour after, two quarts of urine, of the same appearance, gushed from the umbilicus. This was followed by much relief of the abdominal pains. The discharge of urine from the umbilicus, continued for three days, and was accompanied with great improvement of the general symptoms.

"The amendment, however, did not last, for the discharge from the umbilicus again ceased, and for three days, the vomiting, the head-ache, the abdominal tensions and pain, returned with their former severity.

"On the 17th, the catheter was introduced into the bladder, and no urine was found. In an hour after this, two quarts of urine passed from the umbilicus, and soon afterwards great relief was experienced.

"From this time to the 25th, there was little variation, but the young woman suffered during that interval very much from vomiting, and daily passed urine from the umbilicus. The catheter was passed every day, and no urine was found, but the bladder contracted strongly on the instrument; sometimes, immediately after the catheter was removed, a discharge of urine would take place by the umbilicus, and once, as much as three quarts were thus passed.

"On the 26th, for the first time after many days, four ounces of urine were drawn from the bladder. Each succeeding day, this quantity was now increased, and the quantity passed by the umbilicus, was diminished. There was also a general improvement of the symptoms, with the exception of vomiting. This continued obstinate. All this time, the medicine that she took was confined chiefly to the class of purgatives. Blisters were also applied to the neck and epigastrium.

"The bladder was regularly emptied every day by the catheter, for more than a month after this date, during which time, the abdominal pain and vomiting subsided, and there was no discharge from the umbilicus. Early in July, she began to pass some urine, and the power over the bladder was gradually restored. She was discharged in the middle of July, in tolerable health, but still often complained of pain in the pelvic region. She menstruated.

"*Observations.*—This curious case of Ischuria, is well worthy of consideration. The remarkable sympathy observable between the brain, the stomach, and kidnies, is common to all cases of this description, and is so obvious, as not to require any further comment.

"The very remarkable feature in the case, is the occurrence of the urinary discharge from the umbilicus, many days after the ischuria had been noticed. Such instances, although rare, are not without parallel in the annals of medicine. Schenck relates two instances of this kind. In the one, a male, the urine was discharged in consequence of an obstruction at the neck of the bladder, 'tanquam mictione ex umbilico,' for many months, without any detriment to health. In the other, a female, and more resembling the one now related; 'cùm suppressa per multas dies fuisset urina, tandem per umbilicum urinam profudit.'—Schenck Obs. Lib. iij. de Urina, p. 489.

"The interesting question is to determine in what manner the urine is conveyed to the umbilicus in these instances. The urachus offers itself as a mean by which the discharge may be determined to that part, and it seems probable, that in the case of mechanical obstruction related by Schenck, at the neck of the bladder, that a channel of communication was formed by the urachus, between the bladder and the umbilicus. But in the case we now remark upon, there had been no urine secreted into the bladder, long before its appearance at the umbilicus, nor was there for some time after. And the first discharge from the umbilicus, was not of an urinary, but bloody nature. We must, consequently, I think, regard the urinary discharge, in this instance, as vicarious, and as proceeding, probably, from the peritoneal surface. This view seems confirmed, by the great abdominal distention which took place for some time previous to the discharge from the umbilicus, when it was invariably found, from introducing the catheter, that the bladder was empty, and that it contraced on the instrument.

"Some cases of this description, have been placed upon record by eminent men worthy of great credit. There is none, perhaps, more deserving of attention, than that by Platerus, which is thus related by the renowned Sennertus. 'Puellæ cuidam annos natæ tredecim, cùm aliquando copiosè minxisset, urinam subito suppressam esse, atque tunc aquam serosam ex aure dextra adeo affatim

cœpisset effluere, ut una vice mensuræ duæ sæpe emanarint, idque dies aliquot.' He then adds, that on diuretics being administered, the urine was passed freely from the bladder, and the discharge from the ear ceased; but as soon as the diuretics were discontinued, the discharge again took place from the ear, but was altogether removed by general terebinthinate remedies, and local repellents to the ear. The health did not suffer—Sennerti Opera, Lib. iij. p. viij. s. ij cap. 9.

"In our case, it was evident that much inflammatory action was going on in the pelvic viscera, previous to, and during the discharge of urine from the umbilicus; and there was a considerable sympathy of the general health, with the local inflammatory action.

"I may further add, as a notice to this case, that the young woman was again admitted into the Infirmary, in May, 1827, for paralysis of the lower extremities, from which she recovered by appropriate remedies. The urine, for a time, was drawn off by the catheter, but there was no return of the former disease."

30. *Case of Emission of Urine by the Umbilicus.* By M. Falaschi.—This phenomenon occurred some months before death in a very old man, in whom the urethra, at its origin in the bladder, was completely closed. It was supposed that the urachus had remained pervious; but on examination after death it was found that, to arrive at the umbilicus, the urine had passed through an ulcer in the summit of the bladder, and had spread itself in the peritoneal cavity, in a large sac formed by the adhesion of the intestines together, and to the abdominal parietes. The urine passed out of this sac by an ulcer which it had caused at the umbilicus.—*Annali Universali di Médicina, Milana, Nov. and Dec.* 1828.

31. *Induration of the Valve of Vieussens.*—Professor Heusinger, in examining the brain of a woman who had died of phthisis pulmonalis, and who had never had pain in the head or eye, found the valve of Vieussens in a state of cartilaginous induration, and covered with a layer of yellow, and very firm adipose matter, about a line in thickness. This matter was deposited in the pia mater, but adhered intimately to the valve, and was confined to the latter, following it in its passage beneath the central lobule, and extending a short distance into the superior vermicular lobe. The tubercula quadrigemini, and the other neighbouring parts, were in a perfectly normal condition.—*Bulletin des Sc. Méd. March,* 1829, *from Zeitschrift f. d. organ Physik. Vol. II. No.* 4, 1828.

MATERIA MEDICA.

32. *Animal Charcoal.*—Dr. Wagner, of Schlieben, states that in consequence of having seen Dr. Weise's paper on the use of *(carbo-animalis,)* animal charcoal, he was induced to administer it in a case of cancer of the nose, which had been for five years in a state of ulceration, and upon which all the resources of art had been exerted in vain. He began by giving two grains of carbo-animalis, morning and evening, and subsequently three grains. The sore cleaned off, and new fleshy granulations appeared over the whole surface; the circumference became lessened, and the suppuration assumed a healthier character. But no further change ensued, until he applied strong sulphuric acid, which destroyed all the surface, caused high inflammation, and was followed by a healing which was perfect, with the exception of a spot not larger than a very small flaxseed that never closed up. The second case in which he made use of carbo-animalis, was that of a lady, twenty-one years old, who had suffered inflammation of the left breast, followed by a hardening and some suppuration. The mamillary glands remained of a stony hardness for ten or twelve weeks. She took three grains of the medicine, morning and evening, for a few weeks, dur-

ing which time the indurations were entirely removed, and her appetite, digestion, and good spirits returned in proportion. Dr. Wagner does not pretend, however, that this substance was positively the cause of all these changes, but makes due allowance for the youth and vigour of the patient, &c. At the same time the remedy is worthy of the attention of practitioners, who too frequently find all ordinary remedies unavailing in cancerous affections.—*Hecker's Annalen der Ges. Heilk. March*, 1829. J. D. G.

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33. *New and exceedingly active Alcaloid substance discovered in Peruvian bark.* By Dr. Fr. Sertürner, of Hameln.—In the January number, (1829,) of the *Journal der Practischen Heilkunde*, Dr. Sertürner announces the discovery and employment in practice of A NEW ALCALOID, obtained from red and yellow Peruvian bark, as much superior in efficacy to sulphate of quinine and cinchonine, as these medicines are to the bark in powder. The chemical process by which he obtained this alcaloid, we regret to say, is not given in the paper, but is promised for a forthcoming number of the Chemical Annals, published by the author. The general result of his researches is given as follows:—

"The alkaline precipitates obtained from acid extracts of bark, contain, along with cinchonine and quinine, other alkaline substances, which may be regarded as modifications of them, and remind us of the still imperfectly understood composition of opium, in which another resembling substance is found in company with morphium, called narcotin."

The new alcaloid in the alkaline precipitates is powerfully united with a resinous, sub-acid substance, which, if not positively injurious, is still not beneficial, and from which it is separated with extreme difficulty. Dr. S. obtained it however perfectly pure, by using the vegeto-animal charcoal, obtained in the preparation of safranic acid, and which the researches of Professor Liebig have found to contain the krokon acid. The precipitates are mixed with animal coal, and then the crude alkaline substance, (the so called resin of the mother-ley which remains after sulphate of quinine is separated by crystallization,) is dissolved in concentrated sulphuric acid, diluted with three or four parts water, and the solution is thus decolourized; nevertheless, it is necessary to treat the syrup-like solution previously with alcohol, to separate the earthy salts.

The most remarkable circumstance relative to this new and peculiarly concealed alcaloid, is unquestionably that it should be found in the red and yellow bark, though somewhat modified, along with cinchonin and quinine. Then that this alcaloid should excel all the members of its family, quinine, &c. in power and capacity for combining with acids, and may be regarded as the original stock or parent of these substances.

This alcaloid, to which Dr. Sertürner gives the name quinoidine, in its insolubility in water, colour, and taste, resembles the other salts of bark. It is clearly distinguished however by its strength, as well as by its capacity for acids, in which it far excels the other salts of bark, and perhaps all other alcaloids. Its alkaline reaction on the known vegetable colours, as also its intimate connexion with a brownish, suspicious sort of acid extractive matter, is also striking. The salts of this wonderful alkaline substance, free from all admixture, in a warm place, appeared like a balsam, flowing in drops, slippery, and slightly fusible, though it very often contained acids in dry situations.

Dr. Sertürner prescribed the chenoidin in doses of two grains three times a day, with the injunction to swallow a little vinegar after each dose, to saturate the gastric juice, which is sometimes alkaline in fevers, and which, by acting upon the salt, sets the chenoidin free, and thus renders it inert, the alkaline base being insoluble in water.

The success with which this medicine was used in practice, is truly surprising; and if it but maintain the reputation acquired on its first appearance, we have ample cause for congratulating the profession upon its discovery.

34. *On the Bark of the Root of the Calotropis Mudarii.* By Andrew Duncan, M. D.—This is the Mūdar of Drs. Ainslie and Wallich, and the Madár of Mr. Playfair. In the native practice of India, the powder of the bark of the root, as well as the concrete juice of the plant, enters into various compound formulæ for the cure of elephantiasis and many other disorders. From experiments made by Dr. Duncan in the clinical wards of the Royal Infirmary, Edinburgh, it appears that its action is similar to that of ipecacuanha. In doses of from fifteen to twenty grains, it rarely failed to produce full and easy vomiting. In smaller doses, of from three, five, or seven grains, repeated three times a day, it produced more or less nausea, with occasional diaphoresis or sweating, and given in this way, it was most successful in cutaneous affections. Its sudorific action was much assisted by the tepid or warm bath; and in painful affections of a rheumatic nature, by combining it with opium, in the proportion of one grain of opium to five or seven of mudar. In still smaller doses mudar acts as an expectorant, or as a tonic and stomachic. Dr. D. has not observed it to act upon the bowels as a cathartic. The mudar plants and the allied species yield much milky juice, which, when carefully dried, is considered by the Hindoos as powerfully alterative and purgative, and has been long used as an efficacious remedy in the Lepra arabum, the dose being about the quarter of a pagoda weight in the day, and continued for some weeks.—*Ed. Med. and Surg. Journ. July*, 1829.

35. *Vesicating Plaster.*—Dr. Th. W. C. Martius recommends the following formula for this purpose. He says it spreads easily, adheres well, and does not spoil. ℞. Cantharid. contus. ℥iv.; inf. c. aq. ebull. ℥xx.; col. et evapor. leni igne ad syrupi consistentiam. Adde cer. flav. ℥iv.; resin pini, ℥j.; ol. oliv., ol. terebinth. āā. ℥j.; alcohol vini, ℥ij.; M. exact.

The strength of this plaster may be increased by using a larger proportion of cantharides.—*Bull. des Sc. Med. May*, 1829.

PRACTICE OF MEDICINE.

36. *On the Utility of Camphor in Puerperal Mania.*—Dr. Berndt relates in the *Journal der Practischen Heilkunde* for November, 1828, several cases of puerperal mania in which camphor was found useful. In these cases there was great sexual propensities, or even positive nymphomania. Dr. B. had previously ascertained, he says, the inefficacy of the ordinary modes of cure, and the danger of narcotic medicines. He therefore resolved to try the effects of camphor, which appears to have been followed by the most favourable results. The camphor was used in injections in the quantity of about ten grains, or administered internally in doses of from one to four grains every hour, or less frequently, in proportion to the urgency of the symptoms.

37. *On the Means of Recovering Persons Drowned.*—In our first volume, p. 211. we noticed the experiments of M. Leroy d'Etioles, in relation to artificial respiration. He has since presented a memoir on the subject to the Royal Academy of Medicine, which was referred to a committee, consisting of MM. Magendie and Dumeril, who reported on the 20th of April last. M. Leroy announced, "that air if forced into the trachea of certain animals, caused sudden death. The examiners confirmed this assertion. These facts are highly interesting, because many authors recommend inflation of the chest with the mouth, with the syringe, or bellows. The examiners agree with the author, that air forcibly blown into the lungs, will lacerate the delicate tissue of these organs, pass into the cavity of the pleura, press on the lungs and impede considerably the function of respiration. This is easily proved, by injecting air through an intercostal space, by a canula. The tissue of the lungs in dogs is dense, and hence these animals are less injured by insufflation than others. MM. Dumeril and Magendie

have shown by experiments on dead bodies, that the insufflation of air through a tube introduced by incision into the trachea, will rupture the tissue of the adult lungs, and the air will pass into the cavity of the pleura; with the infant, the lung is more dense, and opposes such resistance as not to be ruptured by insufflation. The reporters assert, that not more that two-thirds of the drowned persons, who were assisted during the last five years in Paris, were restored to life; and they think insufflation of air in the usual manner, is one of the causes of want of more success. They agree with the author, that the chest and lungs are passive during artificial respiration, but active in natural respiration; and hence the author proposes to imitate nature, by placing fine needles on the attachments of the diaphragm, and in passing a current of galvanism through that muscle to excite its contraction. By the action of the diaphragm, air will be introduced. The reporters are convinced of this fact, from experiments made on drowned animals, all of which were revived, if submersed under the period of five minutes duration. But they are not quite certain that the recovery was to be attributed to the galvanism; it may be possible, but it would be imprudent to affirm it. As a galvanic apparatus may not be always at hand, the author proposes a very simple proceeding, which consists in putting in action the elasticity of the ribs, their cartilages, and the parietes of the abdomen; in fact, in making moderate pressure on the abdomen and thorax. When the thoracic and abdominal cavities are compressed, the vitiated air of the lungs is expelled, the pressure ceasing, the ribs, diaphragm, and abdominal parietes return by their elasticity to their former situation, the chest is dilated, and air is inspired. By this manœuvre, the blood, stagnant in the vessels of the abdomen and chest, is put in motion towards the heart and lungs; the contractility of the diaphragm put in play, is excited, the convulsive contractions of this muscle become more regular and life reappears. By this method, and by heat and frictions to the abdomen, Maggioni of Padua, restored an infant that had been half an hour under water.

"This plan appears to the reporters likely to be employed with success, from the facility with which air is introduced into the lungs, and expelled from these organs. It is a powerful reason, which ought to render us very reserved in using insufflation of air in the lungs. The reporters, however, are of opinion, that unless persons be seized with syncope, who remain longer than five minutes under submersion, or be affected with syncope at the moment of submersion, recovery cannot be expected. They do not speak decisively on this point. They think insufflation of air, as practised by common people, highly dangerous. The reporters conclude thus: 1st, that it is desirable, that the ordinary treatment, and especially pulmonary insufflation, should undergo some modifications. 2d, that this insufflation, can in certain cases, be usefully replaced by the means proposed by M. Leroy, which require no medical knowledge, no particular apparatus, no loss of time, and are accompanied with no danger; and, finally, that this memoir is worthy of insertion among those of learned correspondents. The conclusions of the report have been adopted by the Academy. Dr. Bernard has offered some reflections on this memoir, and the report, in the public paper denominated *La Globe*, of the 25th of April. He asserts that the practice has been known a long time, and adopted more frequently than the reporters imagined. It was described by all writers of the last century, especially by De Haen, in 1771, and it was the common practice of the watermen of Paris, in 1772, by which they restored many drowned persons to life, sometimes after a quarter of an hour's submersion. M. Bertrand details the experience of a friend, of the highest veracity, who resuscitated dogs by this method, and also the human species."—*Lond. Med. and Surg. Journal, July*, 1829, *from La Lancette Française.*

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38. *On the Application of Lunar Caustic in the Early Stage of Angina.* By M. Toirac.—Cauterization by nitrate of silver, at the commencement of angina

tonsillaris, almost always, it is said, arrests the disease. M. T. relates the following cases from his extensive experience upon this subject:—

Case I.—For several years M. Toirac himself had been liable to pain in the throat, of uncertain duration, which generally arose from cold, or some deviation from his ordinary habits. Rest, mild diet, and sometimes, but very rarely, leeches, were sufficient to remedy this complaint. But the disposition which always remained to a recurrence of the disease, subjected M. T. to many and tiresome precautions to prevent such repeated attacks. He determined to break through the morbid disposition of the parts; and for this purpose he had recourse to the caustic, which surpassed his expectations. When he first applied it, the right tonsil was tumefied, the palate was red and granulated. The velum pendulum palati presented the same appearances. Deglutition was difficult, and the uvula somewhat elongated, and marked with red streaks. The tongue was depressed, and each part which had the most florid appearance, and which was the most painful, was touched with the lunar caustic. In one hour every disagreeable sensation subsided.

Since this experiment, M. T. has always had recourse to the same treatment in similar cases, and it has invariably been successful. The application of the caustic to the mucous membrane lining the mouth gives no pain, although the copperish taste which follows is rather disagreeable, and sometimes produces nausea. The apprehension of increasing the inflammation by this mode of treatment, is entirely chimerical. The same observation, we are assured by M. T. will apply to cauterization by a hot iron. "I daily have recourse to it, *(le fer rouge,)* for some particular affections of the gums: its application to the affected part produces scarcely any unpleasant sensation. Sometimes, indeed, the patient is almost unconscious of it, and is only aware of the operation from the hissing which results from the contact of a heated iron to a humid part!"

Case II.—Mademoiselle A. G. had been frequently subject to sore throat. The same treatment was adopted with similar advantage. The tonsils were previously much enlarged, but afterwards they presented nearly a healthy appearance. Whenever she now experiences any precursory symptoms of her former malady, she has recourse to the argentum nitratum, and in a few minutes she is relieved from all inconvenience. It is proper to observe that this patient had frequently been submitted to the ordinary modes of treatment. Her neck was covered with numerous leech-bites. The slightest exposure to cold, particularly if her neck was uncovered, had always caused an attack of sore throat, to which she was, after the above treatment, not more disposed than the generality of people.

Case III.—A young lady had, from five years of age, been frequently subject to affections of the throat. Her tonsils had sometimes been so much enlarged as to threaten suffocation. By the application of the nitr. argent. the malady disappeared, as if by enchantment.—*La Clinique.*

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39. *Treatment of Herpes Zoster by Cauterization.*—More than ten years have elapsed since the idea occurred to M. Bretonneau, of arresting the progress of certain cutaneous affections by cauterizing them. The substitution of one species of inflammation for another, had the most happy results. Béclard, MM. Duméril, Guersent, and Serres, adopted and gave currency to this process, which, however, was nothing more than a new application of a very old practice.

During the variolous epidemic of 1825, the *ectrotic* practice, as it has been called, was warmly extolled, even to enthusiasm, and it was proposed to cure by this means, measles, scarlatina, erysipelas, &c. It will be seen by this, that nothing less was intended than to suppress the whole cutaneous pathology. We have not heard that the effects have answered to these expectations, and at this day, even in the wards of La Pitié, exanthematous, vesicular, and pustular affections, continue no less than formerly, to run their rounds and even to prove fatal.

It is proper to state, that the idea of M. Bretonneau, purged by time and experience from the exaggerations with which it had been overcharged, has borne its fruit, and that medicine has been enriched by a method as simple as it is advantageous, of interrupting the development of certain inflammations. Every one knows that *zona* is often accompanied with pains of extreme acuteness, which continue sometimes long after the falling off of the scales. These pains in many instances constitute a real inconvenience, as for example, when they occur in the breasts of women.

The authors of an estimable work upon cutaneous diseases, MM. Schedel and Cazenave, affirm that these occurrences are rare, and cite in support of their opinion that of M. Biett, who, in more than five hundred cases of zona, has never met with one attended with dangerous symptoms. Whatever be the confidence inspired by such authorities, it cannot be denied that this disease sometimes developes itself with great violence, since the vesicular patches have been seen to become suddenly gangrenous. These authors maintain that zona gets well spontaneously, and terminate the history of the disease in the following words:—"Is there any necessity here of mentioning the application of the ectrotic practice? It appears to us at least useless in a disease which in the great majority of cases is very light and very simple."

M. de Beauvoys, a physician at Seiches, (Maine-et-Loire,) practices in a country where zona, under the name of *sangle*, creates a good deal of alarm, with those whom it attacks. The popular ideas relative to the nature and danger of this affection, doubtless contribute to render the expression of these symptoms exaggerated, especially among women. It becomes therefore of much importance to combat the cause of these inquietudes, and to put an end to them at once. These considerations have led to the employment of cauterization.—*Nouvelle Bibliothèque Médicale, Jan.* 1829.

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40. *Tetanus cured by Bleeding.* By M. Lisfranc.—A man of about thirty years of age, after working very hard, experienced severe pains in the vertebral column: he was attacked by locked jaw, to which, in a few days, succeeded tetanus and emprosthotonos. In the course of ninteen days he was bled eight times from the arm: the four first bleedings were performed in the first two days, from three to four pallets each. In the same time, *six hundred and eighty* leeches were applied along the spine, two or three warm baths were administered, and every morning and evening a simple clyster, with an addition of twenty-five drops of laudanum, which were gradually increased to one hundred and five drops. The patient was cured. It is to be remarked, that notwithstanding the great loss of blood, the pulse continued both very full and very frequent. The man was so little weakened, that on the fourth day of his convalescence he was in a condition to walk.—*Revue Medicale.*

41. *Tannin in Menorrhagia.*—The *Revue Medicale* for September, 1828, contained some observations of Pata upon the good effects of tannin in the above disease. When these observations met the eye of M. Cavalier he was attending a young woman, thirty-three years of age, affected with hæmorrhage from the uterus, for the cure of which he had employed various means in vain. It must be observed, that this female had been subject, for many years, to a bleeding from the anus, which increased in winter and summer, but without deranging the course of the menstrual discharge. But after a violent affection of the mind, this bleeding became much worse, and a uterine hæmorrhage also took place. At length M. Cavalier prescribed the tannin, in doses of two grains every two hours. On the first day, some amendment was perceptible; on the second, the flux of blood from the anus ceased; and on the third, the menorrhagia was stopped, giving place to an abundant leucorrhœa, but this also diminished under the continued use of the same remedy, and the patient became convalescent. The same author also relates the case of a young girl of seventeen, who was affected with uterine hæmorrhage in consequence of using violent exercise dur-

ing the period of menstruation. She had employed all the common remedies, including extract of rhatany and opium. Every thing having been useless, he prescribed the tannin, and with success equally prompt as in the first instance; for at the end of four days, the discharge had entirely ceased.

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42. *Intermittent Fever cured by Levigated Mineral Charcoal.*—The *Journal des Progrès*, Vol. XIV. contains three cases of intermittent fever, cured by Dr. Pierquin, by levigated mineral charcoal, given in the dose of two drachms. In two of the cases a single dose was sufficient, in the third a second dose was required.

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43. *On the Extract of Male Fern Root for the Cure of Tænia.* Dr. J. J. Ebers has published eight cases in which the above medicine has been followed by complete success in the removal of the tænia. The dose prescribed by the doctor is from eighteen to twenty-four grains, administered at two doses under the form of pills. He has repeated this two or three times, occasionally; though, in general, one dose has been sufficient to cure the patient. He generally orders a purgative to be taken on the following day, which produces the evacuation of the worm, for the extract appears rather to have the property of killing the worm than expelling it. Dr. Ebers draws the following conclusions from his experience:—1. The extract of male fern root is one of the surest means that can be employed against the tape-worm. 2. It generally kills the worm speedily, and thus favours its expulsion from the body. 3. It acts as a specific. 4. It does not expel the tænia in a ball, or mass, as other anthelmintics. 5. This medicine acts usually in a mild manner, and without producing any severe symptom: once only it produced some severe effects in a female, who had not the tape-worm. 6. It also expels *ascarides*, but with this difference, that it does not kill them.—*Journal de Chimie Médicale.*

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44. *Means of suspending the Secretion of Milk.*—M. Ranque chief physician of the Hôtel Dieu of Orleans, employs with success, to diminish the sensibility of the mammary gland, upon which the secretion of milk depends, frictions morning and evening upon the breast, with the following liniment. ℞. Laurel water, ℥ij.; sulphuric ether, ℥j.; extract of belladonna, ℈ij. He prescribes at the same time rigid diet and sudorific drinks.

M. R. it is said, employs this liniment with success in engorgements of the testicles, after using antiphlogistics.—*Journal des Progrès, Vol. XIV.* 1829.

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45. *Mixture of Quinine and Digitalis Purpurea in Phthisis Pulmonalis.*—This was first recommended by Dr. Gunther, of Cologne, in 1825. Since that period Dr. S. has employed the combination alluded to in many cases of consumption, with great amendment of the symptoms of the disease. He gives from two to three grains of the sulphate of quinine, united with a third or a half a grain of the digitalis, and eight grains of fennel, to be repeated four times a day.—*Journ. der Practischen Heilkunde*, 1829.

46. *Combination of Lactuca Verosa, and Digitalis Purpurea in Hydrothorax.* Dr. Joel, of Aurich, first employed this combination. M. Brosius has since administered it in twelve cases of inveterate hydrothorax: and, although he has obtained but two radical cures by it, it allayed the principal symptoms in eight others, two patients only were not benefited by it. He has also verified the fact, previously known, that if this remedy does not produce its beneficial effects in a few days, no hope need be entertained of its subsequent efficacy. Four grains of the extract of lettuce, and one grain of the powder of digitalis, and given every two hours.—*Ibid.*

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47. *Pyroligneous Acid as a Gargle in Angina Maligna.*—This is recommended by Dr. Barth, of Naumbourg, who relates three cases in *Rust's Magazin*, Vol.

XXVII. No. 1, 1828, in which he employed it successfully. He uses half an ounce of the Pyroligneous acid, with five ounces of water and an ounce of syrup; the throat to be gargled with it every half hour.

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48. *Treatment of the Cholera of India.*—M. Gravier, a French physician at Pondicherry, has treated this disease with so much success, losing scarcely two patients in thirty, that the English governor at Madras requested him to communicate an account of his treatment. An extract from this Report is published in the *Bibliothek for Lager*, No. 1, 1827. M. G. considers the disease as a gastro-enteritis, and employs an antiphlogistic treatment. The progress of the disease is rapid, and requires prompt remedies. At first, cold water given in large quantities, afterwards in less, and fomentations to the lower part of the abdomen, diminish the symptoms in all cases. When the extremities become cold, and the pains and cramps diminish, twenty-five to fifty leeches should be quickly applied to the abdomen, according to the age, sex, and constitution of the patient, sinapisms should be applied to the legs, and a rigorous diet prescribed. The cure is effected very rapidly, the patient acquires soon a strong desire for food, and the next day rice water may be given for drink, which completes the cure. To the report of M. G. are annexed some official documents, tending to prove the successful results of the antiphlogistic treatment in cholera.—*Bull. des Sc. Méd. Jan.* 1829.

OPHTHALMOLOGY.

49. *Purulent Ophthalmia, following Suppressed Leucorrhœa.*—A case of this kind is related in the *Nouvelle Bibliothèque Medicale*, for March last, by Dr. Gibert. It occurred in a woman, aged twenty-seven, affected for a long time with leucorrhœa, which was suppressed suddenly by astringent lotions, whereupon the eyes became inflamed, and a puriform fluid was discharged from them. By active depletion afterwards, and finally astringents, the inflammation of the eyes was relieved, but it did not appear to get entirely well until a slight return of the leucorrhœa took place.

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50. *On the Functions of the Great Sympathetic Nerve, and the illustration it affords of the Pathology of Amaurosis.* Professor Langenbeck considers the nerves of sense, as those of vision, smell, and hearing, have need of another order of nerves, which do not possess sensibility of themselves, and are merely an accessory apparatus. Such are the ciliary nerves to the optic, and such the fifth pair to the olfactory nerve: the great sympathetic presides over the functions of vegetative life, but it is directly connected with all the organs of sense, and it is necessary to attribute to it an accessory part in the sensitive functions. It forms a sort of conductor between vegetable and animal life. The author applies these views to the pathology of the eye, and especially to amaurotic amblyopia, and amaurosis. This malady is often a constitutional affection, which manifests itself sympathetically in the eye as if an organic affection. The author demonstrates anatomically, how the eye sympathises with parts more or less remote, through the sympathetic nerve; it accounts for the action of the iris, and refutes the opinion that the excitation is produced by light on the retina, and propagated by the optic nerve to the iris; and, in fine, the author thinks that light excites directly the ciliary nerves of the iris. The dilatation of the pupil by belladonna explains this action of the ciliary nerves, and if fomentations or gargle be employed, the effects depend on the great sympathetic and its irradiations in the iris. The nerves of the retina and optic nerve are of no importance in the motions of the iris, the irradiations of the great sympathetic nerve, which establish the connexion between the eye and other organs more or less remote.

Amblyopia and amaurosis are sympathetic and idiopathic. Each species offers different modifications, which depend on the structure of the retina and optic nerve. The retina receives the ramifications of the central artery, which are accompanied by nerves continuous with those which accompany the trunk of the artery. This vascular and nervous apparatus presides over the vegetative life of the retina; the capillaries of the central artery of the retina are to the eye, what the cerebral vessels are for secretion and reproduction of the substance of the brain. The vitality of the visual organ is organic and animal; derangements can be produced in one and the other mode of vitality; and in each of these derangements we can admit a fundamental principle, a reciprocal relation between the vascular and nervous systems. Both systems are confounded in one, and the excitation of the one influences the state of the other. In admitting both these principles of vitality we can divide amauroses into four classes. 1. Sympathetic amaurosis, determined by organic vitality. 2. Sympathetic amaurosis determined by the nervous system. 3. Idiopathic amaurosis determined by organic vitality. 4. Sympathetic amaurosis determined by the nervous system. M. Langenbeck regards as appertaining to the first class, amaurosis caused by derangement in the abdominal circulation, by abdominal plethora, orgasm, venous turgescence, suppression of the menstrual or hæmorrhoidal discharges; that which occurs in the last months of utero-gestation, and in hypochondriacs with derangement of the abdominal circulation. The disease induced by those causes comes on slowly, and is to be treated by low diet, small abstractions of blood, but copious depletion if there be passive congestion or dilatation of the veins; temperance to be observed, sulphur and cream of tartar if the congestion be not active, sulphur and guaiacum with Richter's pills if there be obstruction. Amaurosis with epilepsy, clonic and tonic spasm, hysteria, does arise from a simple dynamic or vital origin. The treatment is that of epilepsy and the other diseases.

Amaurosis caused by plethora, and attended with head-ache, sensation of pressure in the eye, and excessive sensibility to light, presents the iris in a state of paralysis. Amaurosis may be caused by hæmorrhages, excessive menstruation, salivation, excessive spermatic evacuation, and may likewise be induced by the suppression of coryza, in gouty and rheumatic subjects, and by the repercussion of cutaneous eruptions. The disease may commence by acute inflammation of the retina, or by a chronic phlogosis with an exudation, and with an exaltation or diminution of the vitality of the iris. The antiphlogistic plan must be pursued in such cases, and mercury employed if there be any exudation. Arthritic amaurosis commences with a violent inflammation of the fibrous parts of the globe of the eye, and is soon propagated to the vascular membranes; the disease terminates by an exudation on the iris, with inflammation of this membrane, occlusion of the pupil, hypopium, or an affection of the capillary sanguineous system of the optic nerve. Purgatives, especially the saline, mercury, and artificial ulcers on the skin, are the best remedies. If amblyopia, or amaurosis be caused by gastric irritation, the treatment must be directed against such irritation. If these diseases be caused by mechanical violence to the sub-orbitary region, there is first, irritation or inflammation in the capillary system of the sub-orbitary nerve, and those are propagated to the ophthalmic ganglion and optic nerves. If amaurosis arise from organic disease of the brain or cranium, the optic nerves, and retina are affected directly, and also indirectly by the irradiations of the great sympathetic nerve.—*Lond. Med. and Surg. Journ. July, from Neue Bibliothek für die Chirurgie, &c. Tom. IV.*

SURGERY.

51. *Case of Hydatid Tumour simulating a Crural Hernia.*—M. Pigeotte, Physician of the Hôtel Dieu of Troyes, in examining a female subject, observed two tumours, one on each side, resembling crural hernia. The one on the right

side, was reduced by taxis; being preceded by a fold of intestine, that on the left resisted all efforts at reduction, and on dissection proved to be a hydatid tumour. If this woman had been attacked with disorder of her bowels attended with symptoms analogous to those produced by strangulated hernia, she would no doubt have undergone an operation.—*Nouvelle Bibliothèque Medicale, March*, 1829.

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52. *Lytholomy.*—Of eighty-three operations by the lateral method, performed by M. J. M. Vericel, at the Hôtel Dieu of Lyons, eighty were successful.—*Revue Médicale.*

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53. *Case of Ununited Fracture of the Os Femoris, cured by the introduction of the Seton.*—A boy was admitted into the Bath Hospital, under the care of Mr. Henry Lyford, with a fracture of the thigh, produced eleven months before, and which had been treated in the usual way, but without any union having taken place. On his admission, an oblique fracture was evident, "rather above the centre of the femur, at which part there was a very considerable degree of motion, so much so, that the disunited portions of bone could be made to form an obtuse angle, and that without producing the slightest pain or inconvenience. The foot and leg quite œdematous, and much everted, the limb one inch and a quarter shorter than the opposite extremity, and incapable of being elongated by extension. There appeared to have been an unusual degree of constitutional languor and inactivity, manifested by a very slow and feeble pulse, extreme coldness of the hands and feet, pallid countenance, dry skin, and impaired appetite, with constipated bowels. Ordered a large blister to be applied on either side of the thigh, contiguous to the fracture; meat diet; a pint of porter daily; the bowels to be kept open by equal parts of the mercurial pill and extract of aloes, and three spoonfuls of the compouud mixture of steel to be taken three times a day.

"On the twelfth day, the blisters having totally failed to produce any effect in the way of exciting ossific inflammation, Mr. L. introduced a seton between the end of the bones. At the expiration of two months from the time of his admission, he was discharged cured."—*Lond. Medical and Surgical Journal, July*, 1829.

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54. *Cases of Diseased Larynx in which Tracheotomy was Successfully Performed.*—The circumstances under which tracheotomy may be resorted to with advantage, and those in which this operation is entirely unavailing, are as yet not determined; and they can only be so by collecting the experience and observations of different practitioners. To enable our readers to form some opinion on this interesting subject, we have in the previous volumes of this Journal, related several cases, and with the same view we subjoin a case from the *London Medical Gazette* for 4th July last.

Case I.—Margaret Taylor, æt. 28, was admitted into the clinical ward of the Royal Infirmary of Edinburgh, 23d May, with difficult, noisy, and painful respiration. "The pain, which was increased by pressure, she referred to the larynx and trachea. She had a short painful cough, with difficult expectoration of a viscid mucus. There was much general pain and uneasiness of thorax, with inability to perform complete inspiration. Countenance expressive of much anxiety; superficial ulceration on fauces, a deep ulcer on uvula. Was first affected with sore throat three months ago. Her present complaints have continued for about a fortnight, commencing with difficult inspiration. Two days before admission, the dyspnœa was so urgent as to threaten suffocation. When admitted, it had in some measure subsided. She denied having been at any time affected with any venereal complaint, though she had lived very irregularly and intemperately, and been much exposed in the open air during the night.

"Monday, May 25th.—To day the difficulty of inspiration having greatly increased, tracheotomy was performed by Mr. Liston.

"The patient having been seated on a low chair, an incision was made with a common scalpel through the integuments on the fore part of the neck, immediately below the thyroid gland. A second incision exposed the trachea, which was then perforated with the point of the knife from below upwards to the extent of half an inch. A common bronchotomy tube was immediately introduced into the trachea; this was followed by only two or three convulsive inspirations, after which the respiration became perfectly natural.

"May 30th.—Once in twenty-four hours the tube is removed and cleaned. Lunar caustic is applied to the ulcers on the uvula and fauces once every two days. Breathing and cough easier.

"On June 7th an irregular portion of bone was ejected by the mouth during a violent fit of coughing. On examination, it proved to be the left superior corner of the thyroid cartilage ossified. The ulcerations on the throat have nearly disappeared; she can breathe much more easily through the glottis, and uses a smaller tube. There is little doubt but the urgent symptoms in this case were caused by the death and separation of the portion of bone."

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55. *Extirpation of the Ovaries.*—The *Archives Générales* for May last, contains the accounts of five cases in which this operation was performed. The first is from *Rust's Magazin*, b. 25, h. 2, and is related by Dr. Dieffenbach of Berlin; in this instance the tumour was so attached that the extirpation could not be accomplished; the abdomen was therefore closed, and the woman escaped with difficulty from the consequences of the attempted operation. The second and third cases are related by Dr. Hopfer, in *Graefe und Walther's Journal*, 12r. b. 1s. h. The patients died thirty-six hours after the operation. The fifth case is related by Dr. Martini, in *Rust's Magazin*, b. 27, h. 3. The tumour was so firmly adherent that it could not be removed, but the operator cut away the sac, and was under the necessity of securing some arterial branches: the woman died in thirty-six hours. In the fourth case the operation was successful; it is related by Dr. Hopfer, in *Graefe und Walther's Journal.* A woman, thirty-eight years of age, had borne five children in the space of seven years. After her fourth delivery she suffered from inflammation of the womb: from that period she complained of a dull pain in the left side of the hypogastrium, and about a year and a half after her last confinement she perceived a small tumefaction on the left side: a few sulphur baths caused it nearly to disappear for a time, but latterly it had extended over the abdomen. Two years subsequently to this, her menses were followed by a malignant fluor albus, which added to the debility already induced. Dr. Chrymer having decided on the nature of the affection, and the patient having consented to the operation, it was performed by making an incision from the xyphoid cartilage to the pubes, leaving the navel to the right; the opening made into the peritoneum caused a prolapsus of a great part of the intestines: they were immediately enveloped in a warm and moist cloth. The adhesions of the tumour to the peritoneum and to the edge of the pelvis were then divided, a double ligature was applied to the pedicle of the tumour attached to the broad ligament, which was divided an inch below the ligature. The intestines, which had been wrapped in the towel about five or six minutes, were then replaced within the abdomen, the serosity accumulated in the pelvis was wiped off with a sponge, and the wound closed by suture. The operation lasted a quarter of an hour, and the patient lost only a few ounces of blood: an emulsion, containing nitre, was ordered immediately, and hiccup with cold shivering showing themselves after some little time, some doses of laudanum were administered. The cure was not interrupted by any accident, and at the end of six weeks the woman returned to her native place. Since this operation she has borne a healthy child. The tumour weighed eight pounds, exceeded in size the head of a child, was irregular on

its surface, livid in some places, and within, presented cavities, some filled with a fluid of the consistence of honey, and others with a greenish and sanious liquid.

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56. *Excision of Enlarged Nymphæ.*—Dr. Wagner has performed this operation with success in a girl aged eighteen, in which the nymphæ were enlarged to an extraordinary degree.—*Bull. des Sc. Méd. May*, 1829, *from Horn's Archiv. für Med.* 1828.

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57. *Abscess between the Vagina and Rectum, opening into the latter.*—A woman aged twenty-six, who had piles, was attacked after a confinement with puerperal fever, during the course of which, an abscess formed in front of the anus, and burst into the rectum, but not externally in the perineum. On her reception in *La Charite*, there were seen the traces of old piles, but no external sore or sinus. On passing the finger into the rectum, there was felt in its anterior wall, immediately opposite the posterior wall of the vagina, an orifice large enough to admit the little finger, surrounded with irregular projections, but not communicating with the cavity of the vagina. It was, therefore, an abscess which had opened into the rectum, but not a recto-vaginal fistula, and the surgeon was to take care in operating, that he did not lay open the vagina, and convert it into a case of the latter description. Instead, therefore, of cutting from the perineum, M. Roux laid the patient on her left side, introduced the finger into the rectum, so as to feel the orifice in its wall, carried the bistoury inward, on the finger, and divided the gut and cellular tissue, from the orifice outwards to the perineum. Some portions of skin were removed, and thus the sinus, or rather the deep-seated abscess was laid open from its bottom, and converted into a wound, with a little loss of substance. With proper dressings, the patient was perfectly cured, having merel, had a retention of urine on the evening of the day of operation, which was obviated by the employment of the catheter.—*Journal Hebdomadaire, No.* 21.

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58. *Pseudo-caries.* The shafts of bones, and especially the tibia, in consequence of chronic inflammation, are frequently enlarged, thickened, and at the same time loosened in their texture, which comes to have nearly the same appearance as that of the spongy articulating extremities. In bones so altered a state resembling caries occasionally occurs. Mr. Syme says that he has hardly ever known this pseudo-caries resist the local application of blisters, and internal use of mercury.—*Edinburgh Med. and Surg. Journ. April*, 1829.

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59. *Vertical Fracture of the Patella.*—These accidents are so rare that there is scarcely any mention of them made in modern surgical works. The most ancient, as well as, perhaps, the most accurately described case of this sort is to be found in the collection of La Motte: the fracture was the result of a fall from a height; the two portions of the bone were slightly separated from each other, though the limb was half bent. It was placed in a state of extension, the knee enveloped in compresses, and with a bandage moderately tight. The cure was effected in twenty days, and the callus was not very apparent. About fifteen years ago M. Dupuytren received into the Hôtel Dieu a middle-aged man who had in falling from a great height, broken several bones; the right knee was enormously contused and deformed. The man died the third day after the accident. Examination discovered a longitudinal fracture of the patella into two nearly equal parts: the bones were moveable in all directions, and the capsular ligament contained some bloody fluid. About six months after this a man was brought drunk to the Hôtel Dieu; a carriage had knocked him down, and upon the leg, knee, and left thigh, were seen the traces of the wheel: this had passed from the upper to the lower part of the limb, and the patella was broken in the same direction. The limb was placed in a proper position, and a bandage applied. The cure was nearly complete when the patient was seized with peri-

pneumony, which carried him off twenty days after the accident. On examination it was found that the fragments were united by a well-formed callus, the apposition of the surfaces was exact, and every thing showed that the cure would have been perfect in less than a month. Three years afterwards a man came to the same hospital to be cured of a varicose ulcer of one of his legs: on examining the limb M. Dupuytren perceived that the patella was considerably broader than usual, and had a very evident vertical prominence. The patient, when questioned as to the cause of this appearance, said, that several years before, having had a fall, he had broken the thigh and leg in several places, and the knee-pan had been fractured at the same time: the motion of this bone on the condyles of the femur was free when the extensors of the thigh were relaxed, but it was then easy to discover the friction of a considerable bony projection, situated at the posterior surface of the patella. The following case is not less important:—

M. aged nineteen, a servant, small, dark-complexioned, and of a weakly habit, affected for some time past with chronic catarrh, fell by accident from the second story upon a glazed skylight, that broke with her weight: she was taken up from the paved court-yard with a contused wound of the left knee, and another very slight one on the head. She could not bear any weight upon the wounded limb. She was carried to bed, and the edges of the wound were brought together with a dry dressing. Brought afterwards to the Hôtel Dieu, the dressings were removed, and it was then seen that the wound was not united, and that the patella was broken vertically into two unequal portions: the smaller piece was very moveable, and at the end of a few days M. Dupuytren judged it proper to remove it in the same manner as is done with regard to pieces of any comminuted bone. The limb was kept motionless, and extended upon a pillow a little elevated. A considerable suppuration of the contused parts ensued, and the whole limb was the seat of violent pain. The state of the patient was not promising: the tongue was coated; the pulse sharp, small, and quick; the skin hot and dry, and the thirst great. The treatment of the vertical fracture of the patella requires, no less than that of other fractures, repose for the affected limb, and relaxation of the muscles attached to the broken bone. It has been recommended from theory to procure the contraction of the triceps femoris, in order to bring the two portions of bone together. This practice is bad, and experience shows that by causing the joint to project, the fragments of the bone are separated from each other, probably in consequence of the shape of the articular surfaces, and of the insertion of the capsular ligament round the fragments. The stretching of the soft parts does not answer better in this case than in the reunion of longitudinal wounds of muscles, which is also the result of theoretical views; whereas the best plan is to suffer them to remain in the greatest possible condition of relaxation. Besides, a passive state is the only one supportable for a certain length of time, and it must not be forgotten that patients very soon lose the power of sustaining an effort of permanent contraction. It results, then, from the preceding cases, that vertical fractures of the patella are not uncommon; that they depend always upon external force; that they are also accompanied by wounds and contusions of the part, demanding the especial care and attention of the surgeon; requiring local or general bleeding, absolute rest, a severe diet, and a favourable position for the wounded parts. The limb ought to be kept somewhat elevated upon pillows, and protected by a cradle from the pressure of the bed-cloths. In this position the fragments cannot separate from each other, and the formation of callus goes on favourably. It has been seen that this is not a long process; twenty or thirty days are sufficient for the purpose, and if the condition of the soft parts affords no obstacle, we should not prevent the patient from taking exercise, for the disposition of the broken portions of bone in this case leaves no ground for apprehending the elongation and deformity of the callus. Besides which, the application of a knee-cap, or a simple roller round the joint, gives it a degree of firmness capable of resisting any effort.—*La Clinique.*

60. *Operation of applying a Ligature on the distal side of Aneurisms.*—This operation has lately been performed by M. DUPUYTREN, in a case of aneurism of the subclavian artery. There was a slight hæmorrhage from the wound on the fifth day, amounting to about six ounces. The patient died on the twentieth day. The immediate cause of death does not appear very evident, from the notices of the case we have seen; when we receive an authentic account of the operation, we shall give the most interesting details.

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61. *Lithotrity.*—The greatest triumph that M. CIVIALE has yet achieved, is the cure of the venerable Dubois, upon whom he has lately operated for the stone. M. Dubois has addressed the following letter to the editor of the Gazette de Santé, and which is published in that Journal.

Extract of a letter from M. Dubois to the Editor of the Gazette de Santé.—"Sir, allow me to acknowledge, by the channel of your Journal, the obligations which I feel to my colleagues, for the lively interest they have shown towards me, during my late illness, from which, by the skill of my friend M. Civiale, I have eventually been freed, so that my health is rapidly recovering. I feel proud to be able to add something to the recommendation of M. Civiale's method, which is an effectual substitute for one of the most painful and dangerous operations in surgery, and the invention of which renders his name worthy of a place in the list of the benefactors of mankind. I have the honour to be, &c. A. DUBOIS.

May 4th, 1829.

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62. *Lithotrity.*—Two patients operated upon by M. HUERTELOUPE at the Hospice de Perfectionnement, were submitted to the examination of the surgeons of that establishment in the beginning of April last, and their cure recognised as complete. They were both cured at a single sitting.—*La Clinique.*

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63. *Lithotrity.*—Professor WATTMAN, of Vienna, has performed this operation successfully in two cases. The first was a man aged forty, who had a stone of considerable volume; he was cured in five operations, performed between the 18th of May, and 22d of June, 1827. To accustom the urethra to the instruments, a straight sound, three lines in diameter, was introduced daily for nine days; the patient could not support the continuance of the sound longer than a quarter of an hour, the bladder being very irritable, and disposed to contract spasmodically.

The second case occurred in a man aged fifty-three; the calculus was thirteen lines in diamater, and was completely destroyed in nine operations performed between the 15th of December, 1827, and the 25th of January, 1828.—*Bull. des Sc. Méd. March*, 1829, *from the Medizinische Jahrbücher des k. k. asterr. Staates, Vol. III. No.* 4, 1828.

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64. *Spontaneous Cure of Femoral Aneurism assisted by Pressure.*—A labourer, aged forty-three, had the right femoral artery tied with success by Mr. LYFORD, at the hospital, for popliteal aneurism. In June last, nearly two years after the operation, he was occupied in mowing, when suddenly he felt something give way in the thigh, accompanied with violent pain, and succeeded by a throbbing at the part, which became so much aggravated at night as to rob him of his sleep. In the course of a very short time he observed a small tumour at the lower and internal part of the thigh, which gradually increased, till he made application at the hospital, at which time it was four or five inches in circumference, circumscribed, rather hard, but entirely reduced by pressure on the artery above. He could not at this time enter the house, and was directed to apply a flannel roller so as to occasion moderate pressure, and keep himself perfectly quiet at home. On the 27th of September he was made an in-patient, when the tumour was found to have greatly subsided, and had lost all pulsation. It now appeared that the pressure of the bandage having caused a

most decided diminution of pain, he had increased the compression from time to time, by tying a handkerchief tight around the thigh, the knot being placed directly over the centre of the aneurism. Three days previous to his admission the pulsation of the tumour had totally ceased, and since that time he had experienced sensations in the limb precisely similar to those which he had felt after the operation on the opposite. He also complained most severely of a burning heat immediately under the skin, as if from boiling water, trickling down the foot and leg. The temperature of both feet was alike.

Under these circumstances, pressure was reapplied by Mr. Lyford, by means of a tourniquet and splint, and in the course of ten days, on removing the apparatus, all appearance of swelling had entirely vanished, and so had every vestige of the disease. The knee-joint was at this time capable of perfect flexion and extension, and the patient being able to walk without any support was discharged cured.—*Med. Chir. Rev. July*, 1829, *from Provincial Medical Gazette, No. 1.*

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65. *Fracture of the Os Calcis.*—Mr. Costance relates in the *Midland Medical and Surgical Reporter*, for May last, a case of this rare accident. It occured in a woman aged fifty, who was thrown from the outside of a coach, by its overturning, and the ridge of the top of which fell upon her left heel. The os calcis was fractured, just below the insertion of the tendo-achillis, and the posterior portion was drawn up by the violent contraction of the gastrocnemii muscles, as high as five inches from its former position. Every attempt to replace or even to move this portion, was ineffectual. Notwithstanding the usual antiphlogistic means were sedulously employed, an extensive inflammation of the whole leg ensued, with sphacelation of the integuments, and sloughing of that part of the tendon, which was attached to the piece of bone, and also of the cellular substance all around it, exposing it distinctly to view. It was, however, so firmly attached to the parts beneath, that it could not be moved in any direction. Its upper surface exfoliated; "granulations by degrees filled up the surrounding parts, and the piece of bone was completely covered with new integument, at the end of four months from the accident. It was between four and five months before Mrs. D. could attempt to walk. The limb being much shortened, she was, at first, obliged to use a high-heeled shoe, but is now able to walk as well as ever, with a flat shoe, like the other, without pain, or any apparent lameness. The present, (Feb. 14th, 1829,) situation of the piece of bone is four and a half inches from its lower edge to the bottom of the heel; and a tape passed round the middle of it, over the two ankle bones, measures exactly eleven inches. The heel has now a sound and natural appearance, and feels like a soft cushion; the space which the fractured portion of bone formerly occupied being filled up with cellular substance. The new integument over the bone is thin and tender, and defended by a diachylon plaster, to prevent excoriation."

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66. *Case of Strangulated Hernia, in which six inches of the Intestine were removed.* By John Simpson, M. D. of Bath.—"A man, about sixty years of age, had long been troubled with a large inguinal hernia, which had frequently descended into the scrotum. In the year 1816, four days before Dr. Simpson was sent for, it had come down, and could not be replaced; it then became strangulated. Various and judicious measures had been adopted by a gentleman in his neighbourhood, but it became necessary to perform an operation. On opening the sac, a large quantity of fluid escaped; omentum and intestine were contained in it, and both were in a state of mortification. The stricture, which was at the inner ring, was divided, and great relief thus given; but the parts were glued together by old adhesions, owing to which the bowel could not be returned. Next day, the symptoms continuing urgent, an incision was made along the protruded intestine, when a very large quantity of black feculent matter was discharged. The following day he was better; and the mortified parts, consisting of omentum,

and six or seven inches of intestine, supposed to be ileum, were removed with the knife: very little bleeding occurred. A pad was applied over the upper part of the wound, which was removed occasionally, so as to empty the bowels. In about three weeks some feces passed per rectum, and in a few months the artificial anus entirely healed." Four years after he was alive and well.—*Midland Medical and Surgical Reporter.*

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67. *Extirpation of a Cancerous Parotidian Tumour, and Ligature of the Primitive Carotid Artery.*—This report was made to the Royal Academy of Medicine, by M. Larrey, upon a case of M. Fouilloy, Second Surgeon of the Marine at Brest, Corresponding Member of the Academy.

A scirrhous tumour developed itself in the right parotid gland of a woman, who, after having supported it many years, at length decided, having reached her fifty-second year, upon getting rid of an evil which had been increasing for so long a time. In fact, at this period the tumour extended in a circular form from the temple to the ear, cheek, lower jaw, and one side of the neck, producing lancinating pains, preventing mastication, interfering with deglutition, and even with respiration. M. Fouilloy having decided upon removing the tumour, believed it his duty first to put a ligature upon the primitive carotid artery, to prevent the hæmorrhage which might have supervened in the course of the operation. The skin, in which a transverse fold was first made, was consequently divided in the course of the internal side of the sterno-mastoideus muscle; the cellular tissue which envelopes the artery was discovered, and the vessel itself isolated with all possible care; Deschamps' needle was passed behind it, conveying a ligature, which was tied without the occurrence of any accident, except that the face grew pale, and a momentary pain was felt. After stopping a few moments to allow the patient rest, M. Fouilloy proceeded to extirpate the tumour. On the posterior margin of this, a semilunar incision was made, and carried down to the deep roots which existed between the ear and the lower jaw on the one part, and the transverse apophyses of the cervical vertebræ on the other; by turning it forward, it was then detached from the parotid gland and masseter muscle, in the substance of which it was implanted; it was only necessary to place one ligature upon a vessel, (the internal maxillary,) among all that were opened. An enormous and very irregular wound was the result of this operation, which was closed by three points of an interrupted suture passed into the angular flaps. No accident followed. The ligature of the carotid artery detached itself at the end of fifteen days, and in seventy-five the cure was complete.

M. Larrey bestows upon the operation of M. Fouilloy, the just praises which it merits, and recommended that the account of it should be forwarded to the committee of publication. He, nevertheless, offered some observations relative to the principal circumstances connected with the case. In the first place, the ligature of the primitive carotid did not appear to him to be sufficiently demanded. The conduct of M. Fouilloy, it is true, may be justified by many examples: a surgeon of Lyons performed it to aid in the removal of a portion of the lower jaw affected with osteo-sarcoma; a North American surgeon, in a similar case, has even tied without danger both the carotids; and lastly, an English surgeon has not hesitated to have recourse to this measure for the purpose of arresting a hæmorrhage proceeding from the extraction of a tooth. Nevertheless, M. Larrey thought, that in the operation performed by M. Fouilloy, the placing of the ligature might have been very well dispensed with, which besides was not sufficient to prevent all the hæmorrhage, (because of the anastomoses existing between the branches of the carotid of the one side, and those of the opposite trunk,) since it was necessary to tie the internal maxillary artery; the successive pressure, or tying up of vessels as they may be divided, is quite sufficient to obviate all inconvenience, in proof of which Mr. Larrey referred to an operation of the same nature performed by himself and M. Ribes, without previously tying up the carotid. In the second place, M. Larrey be-

lieved, that in a similar case great advantage would result from operating upon the patient in his bed, instead of placing him upon a chair, as M. Fouilloy did. In this way syncope, which occurs so frequently under such circumstances, may be better guarded against. M. Oudet observed, in relation to hæmorrhages occasioned by the extraction of teeth, that cauterization had never with him been sufficient to arrest them, and that compression appeared much preferable. M. Larrey replied, that cauterization never failed when made without timidity, and the red hot iron was well sunk, even to the very bottom of the socket. He cited three cases of dental hæmorrhagy, one of which caused the death of the patient. M. Duval had never seen a case of this kind, and these hæmorrhagies have appeared to him easy to stop, either by plugging up the alveola, proper compression, or the simple application of the finger.

In an editorial note to this case, we read as follows:—"Called one day to a case of hæmorrhage from this source, which had lasted for twenty-four hours, and greatly exhausted the patient, (cold applications, astringents, plugging with wax introduced into the alveola, having been all used unsuccessfully,) I saw an immediate stoppage effected by the application of a small portion of agaric, kept on by pressure with the finger.—*Nouv. Bib. Méd. Jan.* 1829.

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68. *Coxalgia treated by Mercury.*—Professor Fritz of Prague, censures the use of moxas and cauteries in the diseases of the hip-joint, and affirms that the treatment which he employs is always successful when the complaint has not advanced beyond the second stage. Thirty patients have been cured by him in the space of from two to three months. His method consists in the employment of mercurial frictions and diet. In children, he applies to the diseased hip, by friction, three to five grains of double mercurial ointment; the next morning before breakfast, the child is placed in a tepid bath, after which it is placed in bed; in the afternoon, a cataplasm of bran or of peeled barley is applied to the joint. All stimulating drinks or articles of food are forbidden. If there occurs an augmentation in the secretions, the frictions are suspended. In the third stage of the disease, Dr. F. asserts that the best remedies are rest and cataplasms. The inflammation of the other articulations, Dr. F. treats in the same manner, and with similar success.—*Medic. Chirurg. Zeitung*, 1828.

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69. *Prolapsus Ani.*—Dr. Von Ammon, of Dresden states two cases of *prolapsus ani*, which he effectually relieved by performing Dupuytren's operation of excising portions from the circumference of the prolapsed bowel, in such a manner as to form a star-shaped wound. The bowel being replaced, the contraction produced by the healing of these incisions effectually prevent the recurrence of the disease. His first patient was a stout young woman, who had suffered many years, having a prolapsus four or five inches long. The other was an old and miserably cachectic woman of sixty-five, having a prolapsus three inches in length. Her condition was exceedingly unpromising, yet the operation restored her to good health. Dr. Von Ammon justly concludes, that Dupuytren's operation for prolapsus ani deserves to be ranked among the most valuable improvements of modern surgery. Previous to the operation the bowels should be well evacuated, that the rectum may afterwards remain undisturbed as long as possible. When the patient feels inclined to go to stool after the operation, an emollient clyster should be premised, to prevent the wounds in the bowel from being distended by hardened fæces. The sphincter ani and levator, which are generally exceedingly feeble and torpid in cases of prolapsus, soon regain their tone after this operation.—*Annalen der Ges. Heilk. March*, 1829. J. D. G.

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70. *Enlarged Scrotum Successfully Removed.* By E. Barcome, Esq.—In our second volume, p. 110, will be found an account of a large tumour of the scrotum, successfully removed by Dr. Wells, of Maracaybo; the *London Medical and Physical Journal*, for April last, contains a notice of a tumour of the same

part, of still greater size, successfully extirpated by Mr Barcome, of Georgetown, Demerara. A negro man, aged twenty-eight, muscular, by occupation a tailor and in enjoyment of good health till within the last four years, was much exposed for several weeks, while on militia duty, "at which time the right leg became painful, and swelled as high as the knee; soon after, the scrotum became similarly affected, and has increased to the present size. During this period he has been subject to occasional attacks of intermittent fever.

"Tumour broad at the bottom, and suspended by a narrow neck from the pubis; exterior covered with rugæ of different dimensions. Extremity of the prepuce has the appearance of a navel, from which the urine trickles. Does not evince any pain or suffering of any kind on exercising pressure; only inconvenience from its weight and bulk, which prevents his walking or leaving his house.

"*Operation.*—Avoiding the corpora cavernosa, two oblique incisions were made, commencing at the opening of the prepuce, and continued along the sides of the tumour, meeting below the testes. The dissection was continued to the tunica vaginalis, on cutting into which, a large quantity of limpid fluid (twenty-five ounces) escaped from the left side. The left testis was found to be scirrhous, and was removed in the usual manner. The spermatic vein and artery were the only vessels necessary to be secured during the operation, at which but little blood was lost. The integuments spared by the scalpel were drawn over the parts exposed, and held together by means of stitches and adhesive plaster, assisted by a bandage.

"The tumour, on examination after its removal, was found little vascular, and appeared to be composed of a bacon-like substance, intermixed with hydatids. Weight, twenty-five pounds.

"July.—Twenty-six days after the operation, the parts were healed, and the patient is now able to walk about and attend to his business."

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71. *Case of Amputation of the Lower Jaw.*—Dr. Anderson relates in the fifth number of the *Glasgow Medical Journal*, a very interesting case of this description. As we have not yet received the number of the Journal which contains the account of the operation, we derive the following notice of it principally from the Medico-Chirurgical Review, for April last. A female aged thirty-seven, was admitted into the Glasgow Infirmary, in 1823, "for a fungus of the antrum of the left side, which began two years before, after a long-continued tooth-ache. Dr. Anderson destroyed the fungus by exposing the anterior wall of the antrum, removing the whole of it, scooping out the fungus partly with the finger and partly with a lithotomy scoop, and burning the whole diseased surface with the actual cautery. A good part of the wound was healed by the first intention; but, owing to an attack of erysipelas, it required some time and country air to effect the complete cicatrization. During more than five years Dr. Anderson occasionally continued to visit this woman, during which time she suffered much from rheumatism, and broke the neck of the left femur, but had no return of the fungus in the antrum. In April last she complained of tooth-ache in the lower jaw, and a loose molar tooth was extracted, soon after which a fungus appeared in that situation. On the 5th of last September, Dr. A. saw the tumour, but did not feel warranted in operating on account of the state of her health, and the suspicion that the fracture of the femur had arisen from a malignant diathesis throughout the body. On the 23d of October, at the patient's request that something should be done, on account of the repeated hæmorrhages, Dr. A. advised a consultation with his colleagues of the Infirmary. At this time, a firm spongy tumour occupied the left side of the inferior maxillary bone, from the symphysis backwards to the angle. It felt soft and elastic—its upper surface was flat; sloughy, and indented by the teeth of the upper jaw—it pervaded the whole thickness of the bone; projecting below it towards the neck, where several small glands were felt enlarged, and above pressing inwards on the tongue, and outwards on the face—the grinders on this side

were carious, and the whole of the incisor teeth loose—a thin fetid fluid constantly oozed from the mouth—and hæmorrhage had repeatedly occurred to such an extent as to induce syncope. The tumour was occasionally affected with gnawing pain, which extended to the head; the countenance was sallow, the pulse 110 and small, the appetite bad, and the strength much reduced."

It having been decided, in consultation, to operate, the operation was performed on the 30th of October, in the presence of Professor Burns, Drs. Young, Maclachlan, and Auchincloss, Messrs. Weir, Cowan, Candlish, &c. in the following manner:—

"The ascending plate of the bone was felt to be sound beyond the tumour, and the operation was commenced with the intention of applying the saw a little above the angle on the left side, and at the canine tooth on the right side, by which it was expected that the whole of the diseased structure should be removed. Having seated her on a chair, I began by extracting the right canine tooth; but in doing this, the socket yielded so as to excite a fear that it was unsound, and I determined to include also the two anterior molares. The first incision extended from the angle of the mouth to the lobe of the left ear. The knife was carried through the masseter muscle, which was speedily detached from the bone, and the whole substance of the cheek being dissected from the anterior surface of the tumour, and from the chin, was turned downwards on the neck. A small straight saw, rounded off at the point, was now applied immediately posterior to the second grinder on the right side. When the bone had been about half divided in this way, it was snapped across with the forceps recommended by Mr. Liston. The same process was practised above the angle on the left side, and the bone, having the tumour attached to it, was then removed. Here I expected to have finished the operation; but on examining the anterior section of the bone, it was discovered, that notwithstanding the apparent soundness of its outer shell, the medullary cavity was filled with the same fungous growth with that which had protruded on the left side. A further exposure of the jaw, therefore, became necessary, and this was effected by detaching the cheek as far as the right angle, without any new external incision.

"'It now became obvious, that although there was no fungous protrusion on this side, there was even more extensive disease than on the opposite, and the necessity for extirpating the whole was a duty equally unexpected and imperative.

"'The previous removal of the bone on the left, permitted so much retraction of the cheek on the right side, that I at first attempted to complete the operation at the joint, from within the mouth; and in this, I believe I could have succeeded, having no occasion here to apply the saw. But expedition became a most important object; and I therefore divided the cheek as on the left side, from the angle of the mouth, as far *dextral* as the masseter muscle. Having detached this muscle from the bone, I experienced some of the difficulty described by others, in separating the insertion of the temporal muscle from the coronoid process. In effecting this, and endeavouring to open the joint anteriorly, by depressing the divided end of the bone, it broke across at the neck, immediately below the articular process. I proceeded to divide the pterygoidæi, and other muscles, towards the pharynx and mouth, by carrying the knife forwards in close contact with the inner surface of the bone, until the whole was removed. Having accomplished this, and finding that the fracture below the condyloid process had proceeded from diseased softening; I laid hold of the small portion that remained with a pair of tooth forceps. Along these I carried the scalpel, with which the capsular ligament of the joint was opened, and the head of the bone extracted. The whole of the lower jaw was thus removed, except that portion of the ascending plate, with its processes, measuring an inch and a half, which remained above the application of the saw on the left side. This, on examination, was found to be the only sound part, and even here the nerve was afterwards discovered by the microscope to be more pulpy than usual. The bony structure was quite destroyed where the tumour had

protruded on the left side. Throughout the whole of the right side, even to the joint, the bone was uniformly enlarged, and contained the same spongy substance as had been observed at the first section with the saw; no part, therefore, was unnecessarily removed.

"'The hæmorrhage from this operation was less than I had anticipated, being more from the general vascular surface than from the division of important vessels. About a pound of blood was lost, and only two ligatures were found necessary. But the previous debility, and the urgent symptoms during the operation, were calculated to excite very serious alarm. She became excessively restless, alternately vomiting the blood which she had swallowed, and appearing about to suffocate from some obstuction about the larynx, probably similar to that which occurred to Professor Lallemand, viz. a reversion of the tongue from the contraction of the divided muscles, for which he was obliged to perform tracheotomy.

"'The wound, which had a hideous aspect, was quickly closed, by hare-lip needles at the angles of the mouth, and stitches and plasters towards the ears. Dossils of lint were inserted on each side of the tongue, and the whole was supported from without by a compress and bandage. The pulse was feeble, but distinct; the dyspnœa subsided. She had fifty drops of laudanum in brandy and water, through an œsophagus tube, and was put to bed.'

"On the fifth day after the operation this large wound had completely united except at a single point, from which the discharge of pus did not exceed a drop at each dressing. On the evening of the twelfth day she complained of pain at the upper part of the sternum, which returned several times next day with a feeble pulse, cold skin, and dyspnœa. She gradually sank, and died at 8, P. M. on the thirteenth day after the performance of the operation.

"On dissection, the union of the wound was found to be deep and complete, except at one spot, the size of a split pea, near the lobe of the left ear. The left antrum, from which the fungus had been formerly removed, was nearly three times its natural size, and contained about an ounce of yellow transparent fluid. It had no communication with the mouth—was lined with a firm, smooth, shining membrane—the anterior and upper walls were nearly an inch thick, but very soft; but towards the palate they were thin and almost cartilaginous. A fracture existed at the neck of the left femur, within the capsule, which had united by cartilage, without much shortening. In the upper part of the right side of the thorax there were found about eight ounces of sero-purulent effusion, whilst below these were firm adhesions between the lung, the pleura costalis, and the diaphragm."

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72. *Removal of Nævi.*—"A child, about three months old, was brought to Mr. Brodie on the 13th of February, with two nævi on the scalp. One about the size of a nut, was situated on the left side, a little anterior to the coronal suture; the other, rather larger, was placed further back, and over the median line, apparently at or near the fontanella. The first presented a sort of superficial scab, the traces of vaccination unsuccessfully applied by Dr. Locock; the other bore no such mark. The child was transferred to the operating theatre, and the following proceeding was adopted by Mr. Brodie:—A hare-lip pin was passed transversely through, or, more properly speaking, *under* the base of the larger nævus, so that either end of the pin projected beyond the margin of the tumour, for a quarter of an inch or more on each side. The pin being held in this position, a straight needle, armed with a double ligature, was then passed under the base of the nævus, and under the pin, which it crossed exactly at a right angle. The needle was drawn through, and cut from the ligatures, which were allowed to remain. The two silk threads were next separated, the one drawn to one side, the other to the other, and each tied tightly under each extremity of the hare-lip pin, the point of which had been withdrawn. The ligatures being thus firmly drawn, just as they are in the operation for piles, constricted and strangled the base of the nævus. The ligatures were once or twice

twisted round and round under the hare-lip pin, in order that the constriction might be perfect, when, after the pin had been included, (to prevent its slipping,) in one of the knots, the ends were cut close. The same proceeding was adopted with the smaller nævus, and the infant consigned to its mother, who carried it home. The pain was, of course, severe, but the child did not seem to suffer in any extraordinary degree.

"Mr. Brodie, in the course of some observations to the pupils, stated the mode in which he is accustomed to treat with success the maculæ or spots in children, arising from enlargement of the minuter vessels, without tumour. Selecting the largest of these little vessels, he punctures it with a lancet, and gently touches the puncture with the caustic potash, scraped into as fine a point as possible. Vinegar is immediately applied to stop the penetrating action of the alkaline caustic, and prevent the formation of a scar; which, indeed, would be full as bad as the disease. These cases, Mr. Brodie observed, seldom came under treatment except in the higher ranks, where personal appearance forms such a permanent object of attention."—*London Medical and Surgical Journal, April*, 1829.

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73. *On Excision of Carious Joints.* By JAMES SYME, Esq. of Edinburgh.—Mr. Syme is of opinion that the best mode of destroying carious bone is excision, since more can be done by the gouge or cutting pliers in a few seconds, than by the actual cautery in as many weeks or months. In performing the operation, the surgeon ought to expose the bone very freely, and pursue his excision until he feels that he is cutting in sound bone. It is usual to apply the actual cautery after the diseased bone has been cut away; but this proceeding, Mr. S. says, is very objectionable; at least another scrape with the gouge would be ten times more effectual; and if it is all taken away, as it may and ought to be, what can be more preposterous than irritating anew a weak bone, thereby exposing it to the danger of a relapse? When the large joints are carious, it is much better to remove the articulating extremities entire, instead of attempting to cut away the diseased surface piece-meal, which in most cases, indeed, would be impossible.

In performing the excision of joints, it ought to be remembered that caries does not affect the bone deeply; and, therefore, that while the surgeon ought most carefully to avoid leaving any of the diseased *surface*, he should give himself little concern as to the thickness of bone which he removes. There is always much effusion of new bone for some distance, generally several inches round the carious portion, and the alteration of appearance thus induced is frequently mistaken for a morbid one. It is no more morbid, Mr. S. says, than the callus which unites a fracture, and ought, therefore, to be carefully distinguished. The surface presented by caries, is excavated, rough, and spicular, such as would result from burning a cellular bone, and then laying open its internal structure. The surface of effused bone, on the contrary, is convex and smooth; it looks as if the ossific matter had exuded in a fluid state and congealed into drops; so that while the carious part resembles a piece of sugar partially *dissolved* by water, the surrounding effusion of new bone has the appearance of sugar partially *melted* by heat.

"The excision of joints is usually regarded as a fearful operation, difficult, painful, and dangerous; the slightest wounds of healthy joints being known to be frequently productive of the greatest mischief, and hence the proposal to cut them out altogether seems equally rash and frightful. But it ought to be recollected, in the first place, that all the structure which excites so much disturbance by its inflammation, viz. the synovial apparatus, is removed when the joint is excised; and, secondly, that in cases requiring excision this structure does not exist, being destroyed by the previous disease. Carious joints, therefore, may be cut into with the same impunity as ordinary abscesses, and cut out with no more danger than what attends amputation, or rather not so much, since the balance of action will be less disturbed, *cæteris paribus*, when the limb is allowed to re-

main. As to the additional trouble and pain which unquestionably attend excision, they ought surely not to be grudged in consideration of saving a limb." Of all joints those which may be excised with most ease to the surgeon and benefit to the patient, are the shoulder and elbow.

Mr. S. published some time since two cases of the former, and he relates in the *Edinburgh Medical and Surgical Journal*, for April last, three instances in which he has performed the latter operation with success. We transcribe one of the cases. A ship-carpenter, aged forty-one, "somewhat more than a year ago, began to observe occasional wandering pain in the left elbow, together with some stiffness of the joint, but was not rendered unable to use the limb until between two and three months ago, when the swelling and pain became excessive, with violent disturbance of the whole system. The fever subsided, but the joint remained swollen still and very painful. An abscess was opened by the knife, and other apertures appeared spontaneously, which did not heal. In this state he applied to me on the 1st of January. On introducing the probe through more than one of the openings which have been mentioned, I readily passed it through the joint, grating against carious bones. I proposed excision, and meeting with the patient's ready consent, performed it on Sunday the 3d.

"Having placed the patient on a table with his face downwards, so as to present the elbow conveniently, I made two square flaps. Finding that the ulna was diseased quite down to the coronoid process, I sawed off the olecranon merely, and then cut away with the pliers whatever other parts required removal; by which mode of procedure, the obstacle afforded by the attachment of the *brachiaeus internus*, which proved so troublesome in the second case, was avoided. I then detached the head of the radius, which was completely carious over its whole articular surface, and removed the extremity of the humerus with the saw; but finding that the disease did not seem to be eradicated at the ulnar tuberosity, I cut away both it and the radial one, so as to leave no room for anxiety or doubt. No ligatures being required, I inserted five or six stitches, so as to keep the cut edges in contact, then applied some folds of caddis, and lastly, supported the limb by means of a roller.

"The wound healed entirely by the first intention, excepting a space not larger than one of the original sinuses, and the patient suffered no constitutional disturbance. In two or three days he was walking about, and by the end of a fortnight the cure might be considered complete. The motion of the joint, in flexion, extension, and rotation, is not at all impaired, and there is not the slightest deformity."

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74. *Case of Inflammation of the Mucous Mambrane of the Stomach and Large Intestines, mistaken for Hernia, and Terminating Fatally.*—This case is related in the *London Medical Gazette* for May 16th, 1829, by P. M. Hosking, Esq. as "a case of ventral hernia of one of the appendices epiploicæ of the descending colon, in which was present all the symptoms of strangulation where none existed;" it was, in fact, an instance of inflammation of the mucous membrane of the stomach and large intestines, aggravated, and in all probability rendered fatal, by the repeated exhibition of irritating and active purgatives. The abuse of this class of remedies we have reason to believe is pretty common, and we are therefore induced to give the whole details of the case; and shall hereafter present some other instances, of which we have a number in our possession.

The patient was a gentleman, apparently healthy and strong, aged about sixty-two years, who had been under treatment for an affection of the eye, from which he had nearly recovered. "He had had a small ventral hernia in the left iliac region, for the last three years, but having worn a truss, it had caused him no inconvenience." "When visited this day, April 1st, we found him lying on his back in bed with great prostration of strength, very small, weak pulse, but stronger in the right than in the left wrist; his tongue was furred; the bowels had not been opened since Monday morning, which was from a draught and

pill ordered by Mr. Ware, and that produced but one motion. He had taken also last night, (Tuesday,) ext. coloc. co. gr. x.; p. opii, gr. j. in pil. ij. and ol. ricini, ℥ss. this morning before we saw him. The preceding Saturday, he complained for the *first* time of sickness, and he vomited frequently during that day, but the sickness and vomiting entirely ceased on Sunday after the bowels had been properly relieved. Early on Tuesday morning the vomiting returned, and continued at intervals, until we met on Wednesday morning. He now complained of pain, when the hernia, (which was about the size of a nutmeg,) was pressed with the fingers, and he had either hiccup or vomiting of a greenish bilious-looking fluid; he had also cramps in his legs and thighs. He was ordered to take ext. coloc. co. gr. x.; hyd. submur. gr. v.; M. in pil. ij. statim. and inf. rosæ, ℥vj.; magnes. sulph. ℥j. M. 4ta part. 2da q. h. a strong enema immediately, and a warm bath. 3 P. M. Mr. Vincent, Mr. Ware, and myself, met. The bowels have been freely evacuated twice, but the vomiting still continues. The bath produced great prostration of strength, but no impression was made upon the rupture, although the taxis was used whilst he was in the bath. Pulse 60; very small and weak. To continue the medicines as before, and apply a blister to the scrob. cordis. 9 P. M. When we met this evening, he was much the same; the bowels had not been opened, but as they had been so freely evacuated in the morning, Mr. Vincent deferred operating, conceiving that there could be no obstruction in the alimentary canal, but that a portion of omentum might be adherent in the sac, which would account for the hiccup and vomiting continuing. 12 P. M. I visited him: the sickness had in some measure been relieved; but his bowels had not been acted upon. He was taking ext. coloc. co. gr. x.; hyd. submur. gr. ij. M. in pil. ij. 4tis horis, and I believe some of them were retained. He complained on pressure of a little pain about the umbilicus, and hiccup.

"2d.—8 A. M. We met this morning, and found the symptoms in every respect as urgent; constipation, vomiting, hiccup, and great prostration. He had dozed a little in the night, and said he felt better. Pulse very small and weak. The cramps had left him since the bath. It was thought prudent still to defer any operation, to repeat the pills of colocynth and calomel, and to give an effervescing draught, c. tinct. opii, ♏x. and to apply another blister to the abdomen. 12 noon. Dr. Roberts met us in consultation; the symptoms were much the same as in the morning, excepting that he did not vomit so frequently. The effervescing draughts were continued without the laudanum, and with the addition of magnes. sulph. ℥j. the pills every four hours, as before; and to have the following enema:—℞. Ol. ricini, ℥jss.; sodæ muriat. ℥ss.; aquæ, ℥xij. M. ft. enema. 8 P. M. He had had one rather copious evacuation from the enema, and was apparently relieved. The draughts remained in the stomach some time, but he vomits occasionally. It was still considered adviseable to postpone any operation, as there was no indication of stricture of the intestine. To continue the medicines prescribed last. 12 P. M. When I visited him he was much the same: no relief of symptoms.

"3d.—When we visited him this morning at 8 o'clock he was no better. The bowels had not been opened, sickness continues, and he complains of pain about the rupture. The pulse is very small and slow, with great prostration of strength. Ordered to have the enema repeated. ℞. Hyd. submur. ext. coloc. co. a. gr. v. M. ft. pil. ij. 4ta. q. h. rep. Haustus c. magnes. sulph. ℥ij. horâ inter pilulas mediis. To apply ten leeches to the abdomen. 3 P. M. The injection had returned almost immediately after being thrown up without any fæcal matter; he had not been able to keep the pills down. There appears great distress in the countenance, and he is evidently sinking. The pain in the abdomen is somewhat better, but he still has hiccup if the rupture is pressed upon. Persistat. 9 P. M. He has had no evacuation from the bowels and is in every respect worse. Ordered to have the following injection—℞. Inf. sennæ co. ℥j. magnes. sulph. ℥j. M. ft. enema. To take scammon. hyd. submur. āā. gr. iij. 4tis. horis. 12 P. M. When I visited him he at first did not know me, but soon

recollected himself. The enema had returned without fæces; the vomiting had ceased; and he complained of no pain. I thought that he would not live the night through, and left him. At 4 A. M. I was called to see him breathe his last, which he did about ten minutes after my arrival: he was quite insensible at the time.

"*Sectio Cadaveris.*—Twenty-nine hours after death, Mr. Vincent and myself examined the body in the presence of Dr. Roberts and Mr. Ware.

"On opening the abdomen, no appearance of inflammation was visible upon the peritoneum. The rupture was found to be formed of one of the appendices epiploicæ of the descending colon, which was quite loose in the sac; there was not the slightest stricture or even discoloration of the protruded part. Two or three of the inguinal glands in the neighbourhood were very much enlarged and diseased, probably from the pressure of the truss upon them. A few inches below the hernia there appeared some *inflammation*, which, on opening the intestine, *was found to pervade the whole mucous membrane, down to the sigmoid flexure, where a very large ulcer existed, and which had entirely destroyed the structure of the surrounding parts:* this appeared to have been the cause of the pain when pressed on below the navel, although he did not complain except on pressure. The small intestines were healthy. On opening the *stomach* it was found *inflamed on its whole surface*, and several dark patches were visible, and had the appearance of the effects of chronic inflammation, and which doubtless was the cause of the constant irritation and vomiting. The liver was healthy, but the gall-bladder contained a great quantity of calculi, (about sixty in number,) of various sizes and shapes, and of a very dark colour."

MIDWIFERY.

75. *Cæsarian Operation.*—Dr. J. N. Engeltrum of Amsterdam, has given an account* of a female upon whom he performed the Cæsarian section in two successive labours. The first operation was completely successful; the child, a fine boy being delivered alive and the mother recovering perfectly in a few weeks, so as to resume her occupation as a washer-woman. This was in June 1824. In October of the following year, she found herself again pregnant, and on the 10th of July ensuing, Dr. Engeltrum again performed the Cæsarian section. Rather more blood was lost this time than before, though the quantity was by no means remarkable. A living female infant was removed from the womb, and the wound of the abdomen closed with stitches. She only survived till the evening after the operation; the child lived eight weeks. The death of the patient was attributed by Dr. E. to an entire atony of the womb, which did not contract in the least after the operation, leaving the wound through it quite open. On the first occasion the womb contracted immediately and firmly. The conjugate diameter of the pelvis was two and a half (Rhenish) inches.

J. D. G.

76. *Cæsarian Operation.*—Dr. Busch relates in *Gemeins. Deutsche Zeitschrift fur Geburtskunde, Vol. III. No.* 2, 1828, the case of a woman aged forty-seven, in whom he performed this operation—the patient died.

Two cases are also related in the report of the Obstetric Clinic at Paris, for 1827-8, in which this operation was resorted to by Professor Lovati. The operation was fatal in both instances to the mothers.

77. *Expulsion of the Placenta four Months after Delivery.*—A woman was delivered in January of a dead child, in which putrefaction had commenced in dif-

* In "Nieuve Verhandelingen van het Genootschap ter Bevordering der Heilkunde te Amsterdam."

ferent parts of the body. The midwife made many useless efforts to extract the placenta: she pulled so hard, indeed, by the funis as to break it off. The placenta still remained in the uterus. The cervix uteri closed, and neither uterine pains nor any discharge indicated the probability of the expulsion of the afterbirth. The woman enjoyed a perfect state of health till the following May; slight pains and a sanguineous discharge then appeared. These symptoms lasted but a short time, and again returned. They were now more severe, and were followed by the expulsion of the placenta, the presence of which in the uterus, during so long a period, had been productive of no inconvenience.—*Gemein. Deutsche Zeitschr. für Geburtskunde.*

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78. *Case of Twins.* By M. Ryan, M. D.—In the year 1827, we were called to a case in which one child was born on Monday, and a second on the following Friday. There was no hæmorrhage or untoward symptoms during the interval; the placentæ were united; the infants were born alive, but died in a week: the parturition was natural. A medical friend has assured us that he attended the wife of a soldier who had travelled by the stage-coach thirty miles three days after delivery, and on her arrival at the end of her journey she complained of swelling of the abdomen, which, on examination, was found to be a second infant. The labour was natural, and she suffered no inconvenience during her journey.—*London Medical and Surgical Journal, July*, 1829.

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79. *Pregnancy with Cancer of the Cervix Uteri.*—Dr. Laubreis, a practitioner in Bavaria, has related two cases of this nature: the first proves that conception may take place, if the full term of utero-gestation be completed, notwithstanding the presence of carcinoma of the neck of the uterus, provided it be not far advanced. In the second case, the scirrhus was far in the ulcerative stage before impregnation took place, and the woman miscarried at the end of the third month, and died, by which an opportunity was afforded of examining the parts. —*Journal für Geburtshulfe, &c.*

MEDICAL JURISPRUDENCE.

80. *Poisoning by Acetate of Morphia.*—Mr. G. a Brazilian by birth, student in medicine, in consequence of severe domestic trouble, conceived the idea of putting an end to his existence; for this purpose he procured twenty-four grains of acetate of morphia dissolved in one ounce of distilled water. Provided with this poison, he shut himself in his room, and drank the whole at six o'clock in the morning; six or seven minutes afterwards he began to feel its effects, lost his recollection, and remained in this condition without help till four o'clock in the afternoon. The master of the house, astonished at not seeing the young man make his appearance, knocked at the door of his room; no answer being returned, he caused it to be opened, and found Mr. G. stretched upon the bed, labouring under frightful convulsions. MM. Orfila, Richard, and Tacheron were successively sent for, and found the patient in so desperate a state that they requested the landlord to inform the commissary of the quarter of the fact, not expecting Mr. G. to survive many hours. Nevertheless the most prompt succours were given: he was bled in the arm, and vinegar and water and a strong infusion of coffee were administered. To the great astonishment of the medical gentlemen these means were entirely successful and the patient is now convalescent.—*La Clinique*, 1829.

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81. *Infanticide by Omission.*—Can infanticide be committed on the body of a child that has never breathed? The April number, (1829,) of the *Nouvelle Bibliothèque Medicale*, contains an important decision of one of the French tribu-

nals on this disputed point of medical jurisprudence. We shall omit the history of the case previous to the birth of the child. It appears that the woman had been delivered, but had made way with the infant; this she accounted for as follows, "She declared that if she had brought forth a child, it must have been the evening previous, whilst in the privy; that in fact at that time she felt her body open, (*senti son corps s'entr 'ouvrir,*) but that she was not sensible of any infant being born." On a search having been made the body of the child was found in the privy, and an examination instituted by a physician. He found, "1st. That it was born at the full time, viable, and well-formed. 2d. That nothing demonstrated whether it had been deprived of life before or after its birth. 3d. That it had never breathed after its birth, which appeared to have been the cause of its decease." The physician also added that "it is erroneous to consider that life cannot exist without respiration. When a child is first born, it may preserve its extra-uterine life, which although not an individual existence, certainly is not death." On this report the tribunal declared, "that the child neither died before or after birth, and that want of respiration prevented its continuing to live." Such is the extraordinary decision of the court, embracing one of the most complete paradoxes we have ever met with. It declares that the child did not die, yet convicts the mother on account of its death; it also declares that it did not die either before or after birth, and hence should still be living. We do not object to the principle of responsibility in such cases, but surely the decision of the court might have been based on more rational grounds.

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82. *On Arsenous Acid, considered in a Medico-legal View.* By M. Orfila.—It is generally supposed that the arsenous acid reduced to powder, gives out an odour of garlic when it is volatilized upon burning charcoal, upon a red hot plate of iron or of copper, in a crucible the temperature of which is elevated, &c. It is easy, M. Orfila says, to show that this is not the fact, except in the case where the arsenous acid is placed upon burning charcoal, which abstracts its oxygen, and revivifies the arsenic. If the arsenous acid is volatilized in a crucible upon a plate of iron or of copper, no smell of garlic is perceptible; this odour is given out only by the metallic arsenic.

M. Orfila calls attention to another circumstance, which is to determine what will occur when arsenous acid is placed upon burning charcoal, and a clean plate of copper is held over the vapour, not, however, that he considers this character of any value in detecting arsenous acid, but because authors have differed. Some say that the plate will be covered with a coat of black, others of white. Experiments prove that both these assertions are true, and that the copper is blackened, if the plate be held close to the charcoal, and whitened if two or three inches from it. The first is owing to the arsenic being reduced to a metallic state, which is black; the second, to the formation of white arsenous acid, by the union of the vapour with the oxygen of the air.—*Nouvelle Bibliothèque Méd. July*, 1829.

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83. *Death from Phosphorus.*—A chemist at Biel, wishing to make experiments on the action of phosphorus, took a grain of that substance with sugar on the 20th of October last; next day he took two grains; and on the 23d three grains. Towards evening he experienced great uneasiness, particularly in the abdomen; but these symptoms he unaccountably attributed to rheumatism, and employed no remedies. On the 24th he was seized with a constant vomiting, and the matters ejected had the odour of garlic. Medical assistance was now called on, but without avail; inflammation of the alimentary canal took place; on the 29th he had spasms, and the left arm became paralyzed; he was delirious, and soon after expired, having fallen a victim to his incautious experiments.—*Lond. Med. Gaz. July* 11, 1829.

CHEMISTRY.

84. *Adipocire.*—Dr. Bostock says that he has lately had an opportunity of proving decidedly, that adipocire is the immediate production of the muscular fibre, not, as has been supposed by some eminent chemists, a mere residue of the fat, after the destruction of the muscle. He obtained a portion of a human thigh, which, in consequence of long maceration in water, had undergone the change in question, the form of the muscles was preserved, and there was no apparent loss of substance; there was even an indistinct appearance of the fibrous texture. On heating portions of this substance with alcohol and with ether, the whole was dissolved, except the cellular web, which was left exhibiting its ordinary structure, and forming one-twelfth part only of the whole. An observation of nearly a similar kind had been previously made by Dr. Thomson; Ann. Phil. XII. 41.—*Med. Chir. Trans. Vol. XV.*

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85. *Analysis of the Bark of the Root of the Calotropis Mudarii.*—According to Professor Duncan this substance yields on analysis, 1. An extractive matter, (mudarine,) soluble in alcohol and in water, which is probably its active constituent; about 11.5 *per cent.* 2. A resin remarkable for its requiring a temperature of at least 212° for its liquefaction, and for its little solubility in cold alcohol; about 4 *per cent.* 3. A gummy matter, probably not freed from extractive; about 8 *per cent.* 4. Starch in considerable quantity. 5. Albumen. 6. A little fixed oil. 7. Vegetable fibre. It contains no volatile oil or other volatile principle.—*Ed. Med. and Surg. Journ. July*, 1829.

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86. *Mode of Preparing Animal Charcoal.*—Chop up veal, (a part containing ribs,) into small regular pieces, and char these in a coffee-roaster or drum, which is to be kept constantly revolving before a strong regular fire. After the combustible gas begins to escape, which is rendered evident by the flame that plays about the roaster, the charring should not be continued longer than a quarter of an hour, or the coal will become useless. The dose is from one to two or three grains per diem; larger doses are dangerous.

According to Professor Liebig, the activity of this substance is owing to a *new acid*, which is called krokon säure or krokon acid.—*Journal der Practischen Heilkunde.*

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87. *Detection of Corrosive Sublimate.*—M. Orfila discovers that the test proposed by James Smithson, of dipping a strip of gold, surmounted by a spiral of tin foil, into the suspected liquid, and adding one or two drops of muriatic acid, does not afford a certain indication of the presence of mercury. The gold becomes whitened without it, by the action of the muriatic acid on the tin; this effect ensues, even in a solution of common salt, made by adding twelve drops of a saturated solution of muriate of soda to one and a half ounce of distilled water. When, however, the strip of gold becomes whitened in the experiment, it may be ascertained by strong muriatic acid, whether the effect has been produced by mercury or by tin. If the latter, the tin dissolves entirely and the gold resumes its primitive colour, but if the gold be whitened by mercury, it resists the action of the acid, and remains of a grayish white. The muriatic acid in this case must be pure, for aqua regia will remove the colour in either case.

But the most delicate test of mercury is, after whitening the gold of this little galvanic apparatus, to coil the strip of gold, place it in the bottom of a tube, draw out the tube at the other end so as nearly to close it, and then by heating the bottom expel the mercury from the gold, and allow it to condense in the contracted part of the tube. The smallest portions of mercurial salt may in this way be detected.—*Ann. de Chimie Médicale, June*, 1829.

MISCELLANEOUS.

88. *Influence of Temperature on the mortality of New-born Children.*—MM. Milne Edwards and Villerme, addressed to the Royal Academy of Medicine, in February last, a memoir on this subject; the following are the conclusions to which the researches of these gentlemen have led them. 1st. From birth until the age of three months, the greatest mortality is during the cold months of the year, whilst the reverse is the case subsequent to the age of fifty years. 2d. The mortality is greater among new-born children in northern than in southern countries. 3d. That in the north, the mortality among infants is greater during the winter than at any other season, all other things being equal.

M. Jalin Fontenelle communicated to the Academy in April last, the following results, derived from the researches of Dr. Trévisen upon the same subject, made in Italy, principally at Castle Franco, and its environs. 1st. In Italy, in the months of December, January, and February, of one hundred new-born children, sixty-six died during the first few months of life, and fifteen more in the course of the year, so that only nineteen survive the first year. 2d. That of one hundred, born during the spring, forty-eight survive the first year. 3d. That of one hundred born during the autumn, fifty-eight survive the first year. 4th. That one hundred born in summer, eighty-three survive the first year. Dr. Trévisen attributes this mortality among new-born children, entirely to their exposure to the cold, in taking them to chapel to be baptised.—*Nouvelle Bibliothèque Médicale, March and May*, 1829.

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89. *Innocuous Nature of Putrid Exhalations.*—A committee has been engaged in France in examining the circumstances relative to the knacker's operations. His business consists in killing old worn-out horses, and turning every part of their body to account. The most singular results which the committee have obtained relate to the innocuous nature of the exhalations arising from the putrefying matter. Every body examined agreed that they were offensive and disgusting, but none that they were unwholesome: on the contrary, they appeared to conduce to health. All the men, women, and children concerned in the works of this kind had unvarying health, and were remarkably well in appearance and strong in body. The workmen commonly attained an old age, and were generally free from the usual infirmities which accompany it. Sixty, seventy, and even eighty, were common ages. Persons who live close to the places, or go there daily, share these advantages with the workmen. During the time that an epidemic fever was in full force at two neighbouring places, not one of the workmen in the establishment at Mountfaucon was affected by it. It did not appear that it was only the men who were habituated to the works that were thus favoured; for when, from press of business, new workmen were taken in, they did not suffer in health from the exhalations.

In confirmation of the above observations, similar cases are quoted. Above two hundred exhumations are made yearly at Paris, about three or four months after death: not a single case of injury to the workmen has been known.

M. Labarraque has observed that the catgut makers, who live in a continually putrid atmosphere, arising from macerating intestines, enjoy remarkable health.

Similar circumstances were remarked at the exhumations of the Cimetière des Innocens.

Whatever disease the horse may have died of, or been killed for, the workmen have no fear, adopt no precautions, and run no risk. Sometimes, when strangers are present, they pretend to be careful; but, in private, really laugh at such notions. They handle diseased as well as healthy parts, always with impunity. They frequently cut themselves, but the wounds heal with the greatest facility; and their best remedy is to put a slice of the flesh about the wound.

On making enquiry of those to whom the horse skins were sent, and who, besides having to handle them when very putrescent, were more exposed to effects from diseases in the skin, they learnt that these men also, from experience,

had no fear, and never suffered injury. Horse-skins never occasioned injury to those who worked them; but in this they differed from the skins of oxen, cows, and especially sheep, which sometimes did occasion injury though not so often as is usually supposed.—*Lond. Med. and Phys. Journal, March*, 1829, *from the Recueil Industriel.*

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90. *Statistics of Mental Derangements, Suicides, and Sudden Involuntary Deaths in Paris.* By Dr. Falret.—We have not seen the work of Dr. Falret, to which the prize of statistics has been awarded by the Royal Academy of Sciences, but we extract from the Report made to the Academy on the subject, by Dr. Serres, and published in *La Clinique*, for 9th June last, the following interesting particulars. It appears that the work has been drawn up with great care, and is founded on perfectly authentic documents, embracing a period of thirty years.

Mental Derangement.—The number of females who become deranged is one-third greater than of males; as relates to the period of the *invasion* of this disease, July holds the first rank with regard to women, more becoming deranged during this month than in any other; but with respect to men it holds only a third rank. Among men, more than one-fourth of the deranged are unmarried. Mental derangement occurs most frequently in men between the age of 30 and 39, and in women between the age of 40 and 49. Melancholy is the predominant affection among females, and a desire to commit suicide among males. The same contrast exists relative to cures, deaths, and relapses.

Suicides.—In men a greater number of suicides occur in April than in any other month, whilst as respects women, this month holds only a fifth rank; more women commit suicide in August than in any other month. Of the males who commit suicide, the greater number are bachelors; whilst of the women the greater number are married. With respect to the influence of concubinage upon the production of suicide, its influence is nearly three times more powerful in women than men. In men, most suicides are committed between the age of 35 and 45, in women between the age of 25 and 35. The next period during which most suicides are committed by men is between the age of 45 and 55, whilst in women this holds only a fifth rank; but twice as many suicides are committed by girls under the age of 15, as by boys under that age. With regard to the means employed for self-destruction, a marked preference is given by men for cutting instruments and fire arms, whilst women destroy themselves by poison, falling from heights, or by asphyxia produced by charcoal. The influence of unfortunate love and of jealousy is twice and a half more powerful in women than men, whilst in men a reverse of fortune causes three times more suicides than in women; disappointed ambition causes five times more victims among men than among women; finally, misery alone is equally fatal to each sex.

Sudden Involuntary Deaths.—Apoplexy constitutes the cause of more than one-half of sudden deaths. The number of those who died of apoplexy, between the 1st of January, 1794, and the 31st of December, 1803, was 399; between the 1st of January, 1804, and the 31st of December, 1813, 979; between the 1st of January, 1814, and the 31st of December, 1823, 919. Total, 2297. It thus appears that the proportion of apoplexies, in relation to the population, was one-third more frequent during the two last periods than during the first, which the committee ascribe to the influence of the moral causes to which France has been submitted during the last twenty years. These causes have more especially called into action all the springs of ambition, and as ambition is more fatal to men than women, it explains the enormous disproportion of apoplexies in the two sexes. Of 2297 apoplexies, which occurred in 30 years, 1670 were in men, and only 627 in women. The ages at which apoplexies most frequently occur, are—1st, between 55 and 65 years; 2d, between 45 and 55; 3d, between 35 and 45. Under the age of 35, apoplexies are extremely rare. Apoplexies occur more frequently in winter than summer.

AMERICAN INTELLIGENCE.

Case of Supposed Poisoning with Arsenic. Reported by SAMUEL JACKSON, M. D. of Northumberland.—There died in this town, during last February, a man named Logan, as I supposed of inflammation of his vein from bleeding. He had cut his foot, by which he lost a large quantity of blood, and when this had healed, he went abroad on an intensely cold day and came home drunk. The next day, the 1st of February, he was attacked with inflammatory fever, with pain in his head, back, limbs, and particularly in the leg which he had recently cut. I treated him by bleeding, purging, and all the antiphlogistics; but the house was so open that it was impossible to keep it warm, and the poor man was sometimes so destitute of wood that I was obliged to send him some from my own house. Hence he often complained of having taken a fresh cold, and he imputed to the openness of a window near which he lay, a slight cynanche tonsillaris and cough, which came on about the fifth day. The sixth and seventh days the fever appeared to yield, but on the following morning his wife came for me at an early hour, with information that he was worse.

His fever had increased, and when I took his arm for the purpose of venesection, he said that it hurt him. I found that one of the former orifices was open, swelled, pouring out a bloody, serous fluid, and that a red streak proceeded from it three inches up the arm. The antiphlogistic measures were resumed, he was copiously bled, and a large blister put over the orifice. But the inflammation steadily increased with a hard, wiry, jumping pulse, and I particularly remember that his skin was very dry and hot. The next morning, twenty-four hours before he died, the pulse was unsubdued, the patient very weak, the skin still dry and hot; he was slightly delirious, unless when his attention was excited; there were some fits of anhelation, but no pain in the breast; the arm was very painful on the least motion. I now perceived the idea of great danger, but a dubious remedy being better than none, he was bled again. The blister, to which I had trusted so much, rose well, but without benefit. He had taken small doses of tart. emet. the sixth of a grain every hour, during much of his sickness, and as his stomach bore them well, they were continued through this day till midnight.

At this hour I visited him for the last time, and found him with dry, hot skin; pulse corded and strong, probably the strength of weakness; slight delirium; anhelation; complaining of nothing but his arm. He was now bled as a last and hopeless resort, but he became faint with the loss of six ounces, though lying on his back. I stayed till the pulse rose again into hardness and strength, but did not dare to detract more blood. A large blister was now applied higher up than the former. All medicine was discontinued, his drink was green tea and cold water; his food panada, of which he was desired to take frequent and small portions.

I now considered that his arterial system was in such irritation as not to be subdued by any means that could be used in his present weakness, and that he must necessarily die of the inflamed vein. During the remaining six hours of his life, he complained of nothing but his arm and the blister. With this, indeed, he became so outrageous as to make violent efforts to tear it off. He slept none, was slightly delirious, and frequently insisted on leaving his bed. Near six o'clock he said he was better, but upon making an effort to raise from bed, he fainted and died in a few minutes.

The above recollections of the case, I recorded after an interval of eight days

from his death, when it began to appear that an inquisition was to be instituted. Many particulars may have escaped me, but the outline as above recorded is correct and true.

Dr. Rodrigue and myself went prepared to make a thorough examination of the body, but as the widow refused to leave the house, and as there was no other room, we contented ourselves with merely dissecting out the inflamed vein. This the doctor did in great haste, while I was comforting the woman in a fit of hysterics, and therefore he did not explore the utmost extent of the inflammation. He brought away about eight inches, and upon opening it, we found through its whole extent, the most perfect specimen of intense inflammation we had ever seen. There was no pus nor any thing similar. We agreed in opinion that if this had not been the sole cause of his death, it had at least hurried on the fatal event.

The whole course of this man's sickness was, as I thought and still think, perfectly natural till the inflammation of the vein took place. I had several similar cases during that month, and I remarked to his mother at the time, the wonderful similarity between his case and that of his brother. I did conceive that poison could have no part in the matter, for during the whole course of his disease there was no puking, no purging which was not the effect of medicine, no pain nor sensation of heat in the stomach or bowels, no nausea which was not apparently the effect of febrifuge doses of tart. emet. no spitting nor hiccough, no cold sweats, the teeth were never on edge that I heard of, no inordinate thirst, no cramps, numbness, or paralysis of the extremities, stools not unnatural, countenance not changed, the blood was not dissolved after death, the lungs were said to be sound. He complained during the last three days of nothing but his arm, and the fever thereby excited; his pulse was strong, far beyond his general strength, which is truly characteristic of some direct irritation of the heart, but not found in lesions of the stomach. It was remarked by the inquest that the body and countenance were perfectly natural.

We are not unaware that patients have been known to die of arsenic without pain, but this always happened when such large doses had been taken as to destroy life without reaction, and therefore the principal symptom was frequent syncope. In these cases there was no inflammation. If arsenic had been the cause of this man's death, it is most clear that it must have been the cause also of that inflammation and erosion which was afterwards supposed to be seen in the stomach, and how he could take a sufficiency of the poison to inflame and erode the stomach, without exciting some corresponding symptom, is utterly incomprenensible and without a parallel. Even when Fow. solut. is given a little too freely, it is followed by vomitings, bloody dysenteric stools, and paralysis of the extremities; but nothing suspicious was discovered in Logan's case, though I visited him two or three times every day, and four times the day and night before he died. To reconcile the phenomena of the disease with the known effects of arsenic, we conceived to be impossible. This has been our unvaried opinion from the very first, others think differently—let every competent reader judge for himself.

A few days after Logan was interred, it was discovered that his wife had procured arsenic from an apothecary, and hence some suspicions arose that he had been poisoned. Many little circumstances, altogether trivial and irrelative to the business, had they been properly understood, were soon ascertained and put into the public mouth; the woman's virtue began to be suspected, and it was reported that she had been intimate with a neighbouring gentleman. It seldom happens that reason is listened to amidst popular clamour, hence the coroner with his inquest took various depositions with respect to the man's sickness and death.

My evidence, a copy of which now lies on my table, was in perfect accordance with the above statement of facts.

Sarah Martin, a respectable woman, deposed that a daughter of the deceased "stopped at her house, and said her mother had sent her to Goheen's for

ratsbane, and they would not give her any at Goheen's, but she got it at Hobart's; she said that her mother wanted to give it to the rats and mice, for they eat all her butter. The child was about seven or eight years old. The outside paper was white. This was on Thursday or Friday before his death," the 5th or 6th of February.

George Lothy, Hobart's shopkeeper, testified that the woman had obtained ʒij. arsenious acid from him, on the 30th January, and that a little girl, about eight years old, he knew not whom, nor could he describe her, had bought some from him about three days before.

Davis Goheen testified that a girl, about eight years old, entirely unknown to him, and whom he could not describe, procured two cents worth of this poison, about two or three weeks before this time, the 21st of February.

It was at once determined by common consent, that the child was the same in both cases, and that it could be no other than Logan's daughter; and though the girl resided at this time less than four miles from town, and might have been identified by either of these apothecaries, had they seen her so recently, yet no effort was made by the inquest to produce her in proof or disproof of this hasty but important assumption. Some other persons were sworn, but their testimony was altogether trifling or irrelevant, and when properly understood went rather to clear than to convict the woman. One witness testified that the salts which Logan took contained shining particles, and when I sent for my jar of sal. glaub. *out of which these were obtained*, to show them to the witness, and explain to the inquest the appearance of this medicine when half effloresced, they obstinately refused to look at them. The body was then disinterred, and committed to three medical men, sworn to ascertain if possible the cause of the man's death; and after two whole days spent in this part of the business only, they made in writing the following ominous report, in consequence of which the woman was committed to prison.

"We, the board of physicians appointed to enquire into the cause of the death of William Logan, respectfully beg leave to report, that after a patient examination of the stomach of the deceased, as also its contents, we are of opinion that he died in consequence of poison from arsenic, the same being evidenced both by the appearance of the stomach and a variety of chemical examinations to which its contents were subjected—all clearly indicating the presence of that poison.

W. N. ROBINS.
D. GILBERT.
JOHN B. PRICE.
ISAAC HOTTENSTEIN."

This last gentleman, and one other, who refused to attend, were added to the commission at the desire of the inquest, after the first day's examination.

The circumstances favourable to the accused were as follows:—Her husband had been heard by his sister, a woman of unquestionable character, to complain that the rats were so troublesome that he could not rest at night; (this she swore before Ch. Heck, J. P.) and Andrew Carothers testified before the grand jury, that he had heard the accused tell her husband the rats would eat all their potatoes. She always told a consistent and probable story concerning the arsenic procured by herself. She said that her husband had determined to poison the rats, and was therefore about to send his little daughter to the apothecary for arsenic; that she had a great dread of this article, and after some disputation with him about the safety of using it, she promised to procure it herself, rather than let her child go on this dangerous errand; that when she brought it home her husband was about to mix it with flour, and that in her dread for the safety of her family, she threw it into the fire; that if any portion had been procured by her daughter, it was by her husband's directions, which might have happened as she herself had been frequently absent about that time among her neighbours, where she worked hard for means to support her family. The child declared that her father sent her to Hobart's for poison when her mother was

absent; that when he received it, he was drunk and spilled it on the hearth. The testimony of Sarah Martin, that the child said she had been to Goheen's where they refused her the poison, but that she obtained it at Hobart's, was nullified by Goheen himself, who swore before Ch. Heck, that no one had been denied arsenic at his shop; and it was again disproved by the fact, that neither Hobart nor his boy had sold arsenic on either of those days, the 5th and 6th of February, nor indeed since the 30th of January. But the testimony of Sarah Martin can be thus explained: on the very days and the very hour of the days on which she deposed that Logan's daughter called at her house with the paper of poison, the child came to my shop for sac. sat. which was wrapped as Mrs. Martin said the arsenic was, in the same whitish paper and making about the same bulk. Now, when I questioned the woman before she was arrested, she said that her daughter having opened the paper of sac. sat. which she obtained on Thursday and spilled some, she told the child that this was poison she was going for, and that she must not open it; the daughter asked—is it the same poison that Papa sent me to Hobart's for? Yes—without thinking or enquiring further about the matter, till she found herself brought into suspicion. The honesty and simplicity of this story must be apparent to every one. I particularly remembered having expressed my surprise on Friday morning that all the lead had been used, and that the mother told me Mary had spilled it, upon which I directed her to send for more.

A circumstance of no little importance was, that she appeared to have no motive whatever, for so hideous a crime. She had never lived on bad terms with her husband, and there was no hope the most distant of her being bettered by his death. She was of a compassionate, benevolent temper; had attended him faithfully during his sickness; had come to me personally several times when he appeared to be worse; had come once in the night, as he said himself, contrary to his express design; had several times requested respectable neighbours to visit him, thus showing no signs of mystery. When I requested permission to open the body she granted it in the presence of a good witness, without the least hesitation. She showed no signs of fear in facing any person on the subject, and so loosely was she guarded by the kindness of the Sheriff, that she might have made her escape at almost any time; by night or day with the utmost facility.

From the whole business of the examination, I was most carefully excluded, though I had been the man's only physician. Some of the most respectable inhabitants went forward and desired that I might be present, as I was the oldest physician and supposed to be more versed in post mortem examinations; several of the jury made the same request, and particularly the foreman, but in vain.

The following is a copy verbatim of the minutes of their proceedings, as taken by Dr. R., their chairman, and very politely put into my hands.

"So soon as the stomach was exposed, ligatures were cast around the cardiac and pyloric orifices, so as to prevent the escape of its contents. It being removed, a longitudinal section was made through its anterior part—the contents were then put into a clean earthen dish.

"The general appearance of the stomach presented that of inflammation, but more so in the posterior part, (considering the subject in an erect position,) commencing about midway between its cardiac and pyloric extremities, and spreading towards the latter—the villous lining of which was discoloured and eroded, presenting an inky appearance, apparently the effect of some corrosive substance, (though frequently the effect of some other cause than arsenic.) The dissection of the vein was continued to the shoulder, the inflammation did not appear to extend more than an inch, &c. (*Something wanting here.*)

Before we proceed further with this report we shall stop to discuss the state of the stomach, since it is necessary to put into competition some conflicting opinions.

Dr. G. one of the examiners testified thus on oath before Israel Pleasants, J. P.

"The stomach generally upon its internal surface, presented an inflamed appearance. The inner coat of the posterior part, in an erect position, being between the curvatures, and nearly equidistant between the two extremities, approaching nearest the cardiac orifice, was discoloured and corroded to the extent of from eight to ten square inches. The discolouration was bluish-black or rather inky. The erosion was such as to destroy the texture of the inner coat which was easily removed. The parts of the stomach adjacent to the discoloured part, or rather the whole floor of the stomach when in a supine position, was more inflamed than any other parts."

Dr. Hottenstein, another examiner, sworn at the same time in these words: "I found on the interior surface of the stomach a large dark spot about two and a half inches diameter. Some small dark spots between a gray and a black, were scattered over the internal surface of the stomach, some as large as a pin's head; but not elevated. On the outside of the stomach over the large dark spot there was considerable marks of inflammation. The blood-vessels had been considerably enlarged, as I thought, compared with those of a sound stomach, and of a red colour or pink. The villous coat on the large dark spot had been considerably eroded and softened, but not eaten through—I did not see any ulceration. The stomach had a pale appearance except near the pylorus where it was yellowish. I don't recollect any other marks of disease. I never saw a stomach ulcerated or inflamed. An attempt was made to obtain the garlicky odour from either the precipitates or the dried contents of the stomach, but we did not distinctly perceive it. No experiments were made on the precipitates that I know of—I think they were thrown into the fire."

Wm. A. Lloyd testified on oath at the same time, that he saw the stomach within two hours from the time it was taken from the body, that he had seen several other human stomachs both inside and outside, that Logan's appeared to be good and sound excepting the coloured part, that he particularly examined this coloured part, which was of a lead or a French gray about as large as the palm of his hand, that the outer coat was perfectly sound and not coloured, that he held it up and saw no redness but the veins, that the intestines looked white on the outside, he did not see them opened. Also that Logan was an intemperate drinker for the fourteen years that he had known him and employed him occasionally, that he would sometimes drink half a gallon a day, and would become drunk before dinner."

Here then are some direct contradictions, which can be explained only by supposing that every one had a right to make up his own opinion, in a matter not perfectly understood. As to an *erosion* by arsenic, this is not consistent with true pathology, since it has been demonstrated that the poison does not act chemically on the living solids; and as to the supposed inflammation, it appears to be a mere matter of opinion whether any existed. Dr. H. saw none except in the outer coat over the dark spot; but as none of the others observed this, it is more than probable that the "appearance of inflammation" was owing to the arteries being rendered more apparent by the accidental tenuity of the inner coat. The Doctor saw no inflammation in any other part of the stomach; Mr. Lloyd saw none, even here, and no man was likely at that time to scrutinize the subject with greater severity.

If we are not greatly mistaken, the experienced pathologist will find this to have been a genuine case of *ramollissement*, confined most probably to the villous coat; and as this lesion is now presumed to be the effect of phlogosis, either acute or chronic, we have only to refer to the habitual intemperance of the man for an entirely satisfactory explanation of the whole phenomenon. He was at least forty years old, and has been very intemperate in the use of our country whiskey for many years, an article which as it is here made, must often contain some verdigris. That the continued use of this poison should excite chronic inflammation of the stomach is not to be called in question; and in fact some weeks before his death he was heard by Andrew Carothers to complain of this part, and to say that he should not live much longer. All parts of

the stomach except the dark spot were probably healthy, and a chronic inflammation of so small a portion might not afford any severe symptom. This explanation appears more reasonable than to suppose an acute inflammation by arsenic, without puking or any mode of distress. Witness the following description of *ramollissement* condensed from M. Louis.

"The stomachs presented nothing particular externally. Internally there were sometimes patches of a pale white, *but much more frequently of a blue colour. The mucous membrane in the points corresponding with these appearances, was very thin and soft, transformed, as it were into a glairy mucus.* These spots were sometimes rounded and continuous—sometimes disposed in long and narrow bands. A slight examination would have led to the idea that, in these places, the mucous coat was entirely destroyed, and frequently there was actual destruction but to a very small extent of the membrane. Various degrees of this lesion from slight extenuation to entire destruction of the mucous coat were sometimes observed in the same stomach—exhibiting the process of spontaneous perforation." *Med. Chir. Review for Jan.* 1825, *p.* 174. Since pathologists have attended more to the lesions of the digestive organs, they have found it infinitely more difficult to account for them than for disorganizations in any other part of the body. Even the most *expert* have mistaken vascularity and congestion for inflammation, and a coagulum of blood for an ulcer in the stomach from arsenic. To our present purpose, Dr. Shaw, *Anatomy, p.* 51, has the following remarkable passage.

"From the variety of appearances of inflammation, from the *black spots*, and from the ulceration and corrosion which, in the course of my dissections, I have seen in the stomachs of those who have died without any marked symptoms of affections of that viscus; and from the close resemblance which many of these have had to the stomachs of those persons who have swallowed poison, and from the similarity of appearance produced by gastritis and other diseases to those caused by poison, I have come to the conviction, that the appearance of the stomach or intestines alone, in a question of poison, is not to be depended on. In the last book which has been written on poisons, that of Orfila, the list of appearances which is given, as to be expected where poison has been taken, corresponds exactly with those which I have found in stomachs, where I was certain no deleterious matter had been taken. I am happy to think that this degree of uncertainty will prevent the anatomist from being called on to decide a question which may involve the life of a fellow creature."

Such is the opinion of this expert pathologist—such too, as far as our reading goes, is the opinion of all those who are truly learned and taught in the school of experience; but as our examiners are not unwilling to confess that they had no knowledge of morbid anatomy, they may be readily excused for a hasty assumption from such imposing appearances as they have described. Indeed so striking to them was the sudden apparition of a black spot in the stomach that, as Mr. Lloyd testified, they seemed convinced of the fact of poisoning, before any chemical experiment could have been made.

It is much to be lamented that the bowels were not opened, for if the stomach had really been inflamed by arsenic, these would no doubt have presented corresponding lesions. Dr. Male has frequently found the rectum more inflamed and abraded than the stomach itself, and Dr. Baillie, found it mortified in several cases. Mr. Brodie observes, that the lesions are greatest in the stomach and rectum. Wm. A. Lloyd testified, that on the outside, (that is of course, as far as he could see them,) the intestines appeared healthy. From all the testimony and *from the symptoms of his disease*, mark this part of the history, it may be fairly inferred that inflammation, sufficient to account for his death, did not exist in the stomach. There was no ulcer, no permanent redness, no coagulating lymph, no thickening of the coats, no extravasated blood; but one thing there was, a black spot with the villous coat as it were eroded with arsenic—an operation that cannot take place in the living stomach, however imposing it may appear to the minds of the unphysiological.

The following is the conclusion of Dr. R's. minutes, from which we have inferred that the chemical experiments were as fallacious as the appearance of the stomach.

"The contents of the stomach, about ℥xvi. and principally fluid, were thoroughly mixed by agitation and stirring, and then successive portions submitted to the following tests. A small portion was put into a clean Florence flask to which about four ounces of *common* water and a few grains of sub-carbonate of potash were added; this was submitted to the heat of a spirit lamp until boiling *commenced.* Portions of it were poured into two clean wine-glasses, to one of which a small quantity of sulphas cupri was added; this had the effect of changing the fluid, which had been of a light *hazel,* (owing to the colour of the contents of the stomach,) to a light green colour resembling that of Scheele.

"The surface of the other glass a stick of lunar caustic was applied to; the effect was an immediate *white cloudy* appearance, which soon changed into a reddish-yellow or *orange* colour, and after standing a few hours, resolved itself into a reddish-brown.

"This test was varied in the following manner. Some of the fluid prepared as above was applied to the surface of clean white paper, over which a stick of lunar caustic was drawn; the immediate effect was a line of a pale yellow colour, which, when minutely examined, presented a flocculent and uneven surface.

"The above tests being with (common) water, we subsequently employed snow-water with the same results, save that of copper which appeared of a better green.

"The lines subsequently drawn with nitras argenti were moistened with liquid amm. and the result was a deeper colour than when the ammon. was not used.

"In order to be more certain, and to compare the results of the suspected matter with that of arsen. acid, we treated the latter in the same manner as the contents of the stomach, and the effects were similar.

"The next day, the remaining contents of the stomach having been dried, half an ounce of the suspected matter was boiled with snow-water in a flask until it rose to the top of the vessel; the fluid was suffered to cool, when a stream of sulphuretted hydrogen gas was passed through it, this immediately changed the solution to a beautiful light golden-coloured liquid; after which a solution of arsenious acid was submitted to the same, and the result was precisely similar, and the gradual precipitation of a yellow matter was synchronous in each. The tests were several times repeated, and their results uniformly similar.

"We placed a small quantity of the matter suspected with black flux, between two plates of copper, and submitted them to a red heat; after suffering them to cool, a silvery white stain was very perceptible, precisely similar to that produced subsequently with the pure arsenious acid. This was repeated with similar results."

To this report we must add, that they tried to obtain the alliaceous odour as testified by Dr. H. but failed. They attempted then to metallize the supposed arsenic, but failed here also. This however, was considered as no disproof of their previous experiments, and therefore one accounted for the absence of metal by the presence of moisture, a second by their having too little heat, and a third by their using too much—all which circumstances were surely within the power of the chemist to obviate.

As to this first experiment, that is with sulp. cupri, it is not for us to decide whether it is a safe test for arsenic. Christison, probably the first authority, says decidedly that it is not, and others have adopted the same opinion. That it will detect very minute portions of arsenic is certain; but it is equally certain that it will detect and strike a green colour with other matters which are sometimes found in the stomach, and particularly if the fluid operated on should be tinctured with yellow. Now Dr. H. testified before Esq. Pleasants, that the fluid essayed with this test was the colour of brandy and water—Dr. R. in his minutes calls it a hazel—to compare colours is extremely difficult. We are not

predicating any objection to this test upon the possible presence of onion sauce, having satisfied ourselves, that Dr. Paris's observation is correct—that the precipitate formed by onion juice, potash, and sulph. of copper, appears green, only because it is viewed through a yellow medium, produced by mixing potash with the vegetable juice. But, hold! the history of this objection, from its author, Dr. Neale, to this time, shows how even experienced eyes may be deceived when experimenting on the coloured contents of the stomach. This consideration, too, does not more impair the value of this test, than it does that of all others which depend merely on striking a colour and are not *pursued with consecutive agents.* Had the precipitate been an arsenite of copper, they might have rendered this probable by testing it with the nit. argenti, and the yellow fluid thus formed they might have essayed with various acids; or they could have dried the precipitate and attempted the tombac alloy, or have burned it on charcoal for the alliaceous odour. A portion of their green they might have tested with ferro-prussiate of potash, or with sulphuretted hyd. water, which they had at hand; or they might have dried the whole and retained it for the collective metallization. In fact, if the supposed green was utterly fallacious, viewed as it was through a yellow or hazel medium; it could not have remained so had they transformed it upon white paper, as directed by Dr. Paris, or had they merely applied to it a stick of lunar caustic. When Mr. J. Kerr obtained a green precipitate from the juice of onions, phosphate of soda, and sulph. of copper—one which, *mirabile dictu*, could not be distinguished from Scheele's green, by either himself or three medical friends, he showed them that it would not form the tombac alloy.* And when Dr. Paris was supposed by a number of gentlemen to have struck Scheele's green in a supposed case of poisoning, he transferred the deceptious precipitate on white paper and showed them that it was plainly sky-blue.†

Since writing the above, however, we have proven that a mere yellowishness of the fluid, at least as it was made by brandy, coffee, tea, both green and black, or by gamboge, does not render the precipitate of carbonate of copper apparently green, neither does the real yellow, produced by a cold infusion of onions and potash. When we made our former experiments, it was, as we believe, with a *decoction* of onions and phosphate of soda. This shows that mere yellowness of the medium has no such effect as Dr. Paris supposed; there must therefore have been some latent principles that eluded his chemistry, and these it is that render the liquid tests fallacious. One of these, however, the learned Dr. has mentioned—"The presence of peroxyde in the cupreous salt will also impart a green colour to the precipitate produced by an alkali." *Pharmacologia, article Arsenic.* All is darkness and disputation as it regards this agent, the sulphate of copper, and further investigation is wanting.

As to the experiment with lunar caustic, there is here an aberration that we are able to explain. The report states that there was "*a white cloudy* appearance, which soon changed into a reddish yellow or *orange*, and after standing a few hours, resolved itself into a *reddish brown.*" We procured water from the pump belonging to the house where the experiments were conducted, and having dissolved in it a very little carb. pot. and applied the silver test, the "white cloudy appearance" was made, which subsequently went through the very changes that Dr. R. mentions; that is, it soon changed to "a reddish-yellow or orange colour, and after standing a few hours, (perhaps two,) it changed into a reddish-brown," which was permanent. Here then was no arsenic. But upon adding Fowler's solution or the arsenite of potash to some of the *same water*, the real arsenite of silver was thrown down, which continued yellow in the light for at least six hours. It may be replied that the above test was tried with the fluid spread on white paper and that the colour struck was a pale yellow with a flocculent surface. It must be remembered that this was done with the same fluid as the above, and why it should afford a yellow precipitate on paper

* Eclect. Rep. VIII. p. 139. † Paris and Fonblanque, Vol. II. p. 242, note a.

and a white in the glass is utterly incomprehensible. As to the flocculent surface upon which Dr. Paris depended so much for a clear distinction between the effects of arsenic and of an alkaline phosphate, this is somehow an incomprehensible mistake; we have frequently tried them side by side on white paper, and found them equally yellow and equally flocculent. The different changes of colour which they afterwards undergo is of more importance.

But what utterly condemns this experiment with the lunar caustic, is the fact, that it was repeated with snow-water and with the same results; that is, with "an immediate white cloudy appearance, which soon changed into a reddish yellow or orange, and after standing a few hours resolved itself into a reddish brown."

It is to be lamented that the copper and silver tests were used in the most objectionable forms. The ammoniurets are less fallacious, are equally active, and are quickly prepared.

The experiments with sulph. hyd. gas appear to have been imperfectly performed. Nothing is said of their having added an acid, without which it is doubtful whether a precipitate will form, unless the arsenic be present in larger quantity than can be presumed in this case. We have tried the experiment with one grain to the ounce, and no precipitate took place for forty-eight hours, but a few drops of nitric acid then precipitated the whole colour in one night. President Cooper says, that "the test of sulph. hyd. is ambiguous from similarity of colour in other metallic precipitates, and from impurity of the gas." —*Tracts on Med. Jurisp.* 439—and Dr. Bostock says that tart. emet. and some other bodies will produce phenomena which may be mistaken for the effects of arsenic," *Paris and Fonblanque, II.* 249. Again he says—the colour and formation of the precipitates are "so similar, that when the comparative experiment was made on the two substances, in contiguous glasses, it was difficult to discover any visible mark of distinction."—*Eclect. Repert. I.* 32. So true is this, that there now stands before me a bottle of white oxyde dissolved in water, and one of a similar solution of tart. emet.—their strength not recollected—both rendered yellow by a stream of sul. hyd. gas; there is no precipitate in either, and if there be any shade of difference, it is almost infinitessimal.* Now it is a fact, that Logan took tart. emet. in small doses without puking, for several days; and it is in sworn testimony now before me, that he took it till six hours before his death. It appears then from some of the highest authorities that even this test is fallacious; and I have fully shown that it was particularly so in this case. We are aware that Christison considers it the very best test; but then he goes entirely on the principle of metallization. He considers all the others as fallacious or useless; he looks upon this too, not as a test, but as a mere chemical means of collecting the arsenic for sublimation. This is the purport of his paper in the *Edinb. Med. and Surg. Jour. July*, 1824.

Of all the experiments, that of making the colour on copper plates, appears to be the most imposing; but Dr. Paris considers that "with whatever care this experiment is conducted, it is, *to say the least*, a clumsy and unsatisfactory test, and ought never to be relied on."—*Pharmac. Art. Arsenic.* Professor M'Nevin thinks that a shade of colour produced in metalurgy must not be depended on—*Cooper's Tracts, p.* 423,—and Dr. Bostock found that a little charcoal burned between plates of copper, left a mark so similar to that of tombac, as "to differ in degree rather than in kind."—*Ecl. Rep. I. p.* 37. This is a most important discovery, it shows how the unwary may possibly be led into error by the charcoal in the black flux.

It must be confessed that all these experiments, taken collectively, do afford some feeble presumption that arsenic was present, and had the examiners stopt here, as some more careless have done, this presumption might have been worthy of consideration. But they failed in their attempts at sublimation, and

* This hydro-sulphuretted solution of tart. emet. inclines to orange if there be more than one-eighth grain tartar to the ounce of water.

also in attaining the alliaceous odour. Now a question arises whether these failures are not sufficient to nullify all their previous experiments. We presume that most chemists would answer this question in the negative; had these experiments been more correctly and more variously performed, with consistent results; but as matters stood these negatives conspire with other facts to prove that none of the metal existed in the stomach. They leave us destitute of all *positive* proof, and greatly debilitate the *circumstantial;* therefore, since such strong suspicions arose in their minds, it is greatly to be regretted that they did not proceed further with the enquiry.

Some important leading tests were omitted, as lime water, the favourite of the German chemists; chromate of potash, as proposed by the illustrious president of South Carolina College; ioduret of starch, invented by Brugnatelli; the aqua sapphirina; the mineral cameleon. All the consecutive tests which are of the greatest importance, and which may be so variously, so easily, and so satisfactorily employed, were omitted. The stomach was not boiled, the bowels were not opened, nor their contents examined; no search was made for particles of arsenic with a microscope, though a very powerful one was within their reach; the stomach was destroyed, and no drawing was made of it, though some excellent delineators were at hand; the precipitates were thrown away; how many tests failed without notice in the minutes, like the attempt at sublimation, and the garlic odour, we are not yet informed. The tests they used were more liable to fallacy than several others omitted; and of the copper and the silver tests, the most fallacious preparations were employed.

We are not disposed to blame the examiners, they relied on Dr. Paris' Pharmacologia, here then is the reason they were so easily satisfied of the presence of arsenic. This author says that "the silver and copper tests are capable, under proper management, of furnishing striking and infallible indications; and that in most cases they will be equally conclusive, and in some even more satisfactory than the metallic reproduction on which so much stress has been laid." This is an opinion peculiar to himself, and is deeply fraught with error and homicide. He plainly represents, too, that there is no means of proving the reduced metal but that of burning it for the alliaceous odour. This, too, is a groundless error, and we know that it swayed the mind of one of the examiners; for when I urged him not to cease till they obtained the metal, he quoted Dr. Paris to prove that they had no means of identifying it. The most intelligent man on the inquest held the same opinion, derived from the same author; he also quoted the doctor's story of the deceptious appearance of the charcoal crust in the tube.

Let all these people reflect that liquid tests afford, *in the first place*, one degree of evidence only; that is, they strike a few different colours with some principles or compounds, they know not what; but, *secondly*, when they take the precipitates they formed, and extract from them a metal, they show that it was a metal which struck these colours; and finally, *in the third place*, they prove this metal to be arsenic by the proper experiments. This is an irresistible induction; the test, instead of being merely presumptive, is, in the first place, presumptive; in the second, confirmatory; in the third, decisive and convincing. Dr. Paris is so delighted with making these arsenical colours, that, while writing on the subject, he has laid down his pen to "convince himself with how little trouble, and with how much pleasure and profit, such experiments may be conducted." Vol. II. p. 186. If this be not mere childish play, it is at least the extravagance of a man transported with novelties. If such men as this learned and most excellent doctor, can be thus carried away with yellow and green, it surely cannot be expected that his pupils, youthful and ardent, will show steadiness; or that we, to whom these things are new, should not be equally dazzled with the success of our chemistry. Does not every one perceive how much room there is left for the ardent imagination of a man zealous in the pursuit, to play on these colours. *Nimium ne crede colori.* It is a pretty business, no doubt, to strike all these colours in a glass of transparent fluid, in

which we know that arsenic is present; but to search for the poison in the turbid and various mixtures of the stomach is a far different thing.

It has been said that liquid tests will indicate the presence of arsenic, when the quantity is too small for metallization. This is no doubt true—they will indicate but afford no positive proof. Pray, then, is the medical jurist to accommodate his principles so far as to swear that arsenic is there, though he cannot find it, and lay the blame of not finding it on his own inability? Shall he be allowed to predicate his failure on there being too much or too little heat or moisture, circumstances entirely in his power to obviate? The physicians, in Kepler's case, accounted for the imperceptibility of the garlic smell by the presence of burning tar; that is, *if* they had not smelled the tar they would have smelled the arsenic.

The physician ought always to hold a consistent philosophical language, which does not permit him to call a green precipitate by the name of arsenic. Let him refer to the maxim of law—*de non apparentibus et non existentibus eadem est ratio*—and beware how he swears to the presence of what he cannot find. Hence the prudence of our examiners cannot be too highly commended—they swore, not to the poison itself, but to the mere indications thereof. The furnace is indeed the crucial experiment which will in some cases confirm, in others annihilate all the rest; and of so much importance does Orfila think it, that he does not allow the utter failure of all other tests to be considered a sufficient negative, but requires that the sublimation should also fail. Vol. I. p. 133.

We are by no means certain that a person may not be convicted on the presumption afforded by liquid tests; but they afford mere presumption, and as such only ought they to be brought into court. If those who are learned in law and versed in all the astucious arts of detecting wickedness, find such a concurrence of circumstances—chemical, pathological, moral, miscellaneous—as may authorize them to convict the accused, the matter stands between them and a higher tribunal. With this species of casuistry the medical jurist has nothing to do. He ought to state whether he found the metal itself or the mere indications afforded by liquid tests, and he ought never to vary his language in the slightest degree. If no metal has appeared in the glass, it is a negative argument of great weight; but if all the leading tests have been used, and these followed by consecutive agents, the effect will be to strengthen or weaken, to confirm or nullify all the other circumstantial testimony. Men have been justly or at least truly convicted by presumptive evidence—this is the business of law and not of medicine; we shall therefore conclude with an opinion contrary to that of Dr. Paris, if it is permitted us to oppose so great an authority, that the copper and silver tests do *not* afford "infallible indications," and that it is grossly negligent if not highly criminal to trust to them, when so many others may be so easily and so satisfactorily employed. Had Dr. Neale with his onion juice, and Dr. Edwards with his supposed arsenic from Mrs. D.'s stomach, both resorted to consecutive agents, the cause would have ended with satisfaction to the public, and the troublesome discussions of the subject, ever since that time, would have been thereby prevented. And here let us observe by the way, that in all Dr. Paris' chapter on arsenic in his Pharmacologia, there is not one consecutive test mentioned. Our worthy examiners were therefore left like mariners in an ocean to them unknown, the rocks and shoals of which were left unnoted in their only chart.

Let it not be supposed that we blame the examiners—they did the best they could with zeal and alacrity—no one is capable of doing more. We are merely pointing out those omissions which we should most probably have made ourselves. Among these we neglected to mention the propriety of sending the stomach with a portion of its contents to Philadelphia, to be examined by such chemists and such pathologists as are not to be expected on this side the mountains. This is practised in Europe, and it ought not to be despised by the *savans* of our American villages. If there is murder it ought to be unveiled; if on the

contrary innocence is accused, the honour of families impugned, the peace of children and their posterity about to be destroyed through many generations—surely no pains ought to be spared to prevent the cruel catastrophe, with the consequent endless and wide-spreading imputation of unmerited infamy. The identifying of arsenical colours, as struck by liquid tests in coloured fluids, has deceived some experienced chemists, and it is not to be expected that the laborious village practitioner can have such knowledge of chemistry as may enable him to pronounce on this tremendous business of life and death—a business which the most experienced ought to approach with fear and trembling, with terror and dismay. If the most expert have heretofore blundered and contradicted each other, what is to be expected of us who know nothing of this matter, but what we glean, pro tempore from books of blunders, for the use of the case in hand?

Let it be observed that we have brought forward only a few of the many arguments that lie against a sole reliance upon liquid tests; and as the necessary limits of this paper have excluded some of primary importance, we intend to produce them at some future time.

The reader will be glad to learn that this woman was acquitted. Though no testimony was heard in her favour, and all the physicians swore they believed the man died of arsenic, she was promptly acquitted by the *grand jury*, twenty-three to one. No part of the evidence was committed to writing.

The above case will afford some matter of argument both for and against the supposition of poisoning, and therefore it is calculated to be variously useful. Those morose diabolical spirits who are glad to prove their neighbours yet worse than themselves, will most probably find murder in the case; but the philosophical mind, seeking only for truth, and delighting—not in the vice but in the virtue of others, will hesitate long in this painful sentence. After the most patient and candid investigation, with a full knowledge of all the circumstances, we are decidedly of opinion that the woman was incapable of this hideous crime; that she had no motive to perpetrate it; that all the evidence of poisoning is a mere shadow; that the collective circumstances on the other side of the question, are altogether irresistible. Arsenic was purchased, the man died, there were some presumptive proofs of poison in the stomach—these are mere scattered links in the chain of evidence.

This publication, it is hoped, will have its use by exciting the reflections of those who are better qualified than the author; with these humble views, therefore, and no other, he offers it to the profession "with the spirit of a man that has endeavoured well"—of one whose position and feelings are fortunately such, that he has neither interest to serve nor malice to gratify.

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Case of Punctured Wound of the right side of the Chest, penetrating deep into the right Lung, in which the usual symptoms of injury of the lungs were absent, followed by Mania a Potu and Death. By Henry S. Levert M. D. House Surgeon to the Pennsylvania Hospital.—John Johnston, aged about thirty-eight, was admitted into the Pennsylvania Hospital on the 20th of September with a wound of the right side of the chest, produced with a large carving knife. The hæmorrhage was so profuse as to induce us to suppose the subclavian had been wounded; it was suppressed however with lint and compresses until the surgeon arrived. Preparations were now made to secure the subclavian with a ligature. Compression was made above the clavicle, with a key, until pulsation in the radial artery ceased. The lint and compresses were removed, and the coagula turned out: the pressure above the clavicle was relaxed gradually, until the pulsation at the wrist returned, but much to the surprise of all present, no hæmorrhage occurred. It was now thought adviseable by the surgeon, (Dr. Harris,) to postpone the operation of tying the subclavian, until a repetition of the hæmorrhage should render it imperious. Accordingly the wound was drawn together with adhesive strips, and considerable pressure made by the use of compresses and rollers, and a careful attendant placed at the patient's bed side.

9 o'clock P. M. A very slight return of the bleeding, not enough, however to create any alarm. 21*st*. Morning. No more hæmorrhage. The patient remained pretty comfortable until about 3 o'clock P. M. at which time he had a chill —was ordered now gtts. xl. tr. opii. At 5 P. M. the chill had gone off, and I found the patient labouring under mania a potu. Ordered ℞. P. opii gr. iij.; P. camp. gr. v.; q. o. h. with ℥ss. tr. hum. lup. every intermediate hour. This had little or no effect upon him. He died about 11 o'clock the same evening.

Post Mortem—22nd. Sept. External wound about three inches long, and very nearly in the same situation as the external incision for taking up the subclavian below the clavicle. The integuments being turned back, we traced the opening through the pectoralis major and minor, into the cavity of the chest. The latter muscle was divided almost entirely, a very few fibres remaining on either side. The knife entered the chest between the second and third ribs, and penetrating the upper lobe of the lung at this point, continued its direction towards the spine, dividing extensively the air-cells and minute blood-vessels. The wound in the lung was between three and four inches long, and between one and two inches in width. The external mammary was divided. The intercostal escaped. There was no injury of the subclavian or axillary artery.

Remarks.—No difficulty of breathing, no cough, no spitting of blood, or any other symptom indicating a wound of the lung existed in this case. The lung on this side, from some previous disease, was strongly adherent to the ribs, which precluded the possibility of an internal hæmorrhage, and consequently of any compression of the lung from this cause. In this manner we may account for the ease with which the patient respired. The brain exhibited no marks of disease.

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Case of Severe Lacerated Wound of the Rectum and Bladder. By Charles Hall, M. D. of St. Albans, Vermont.—In the month of May, 1828, I visited Charles B. Weston, of Sheldon, an industrious and respectable farmer, between fifty and sixty years of age. He had just received a most severe laceration of the rectum and bladder, occasioned by being brought to the ground, with some degree of force, partially suspended by a slim staddle, which he had climbed, and by his weight, had bent over, while attempting to destroy a nest of young crows, situated on a large tree standing near by. In this predicament he came to the earth, holding by his hands, to the top of the small tree, his posteriors coming upon a dry beach bush, the body of which, the size of a large walking staff, being broken by the fall, passed, per anum, about ten inches into his abdomen, when his feet touching the ground, prevented its further progress. From this unpleasant positition he with some difficulty extricated himself; and on withdrawing the stub, his bladder emptied itself through the opening. He was brought to his house, where a few hours afterwards I saw him in company with Dr. Judson, his family physician. There was no external laceration, the stick having passed in the natural course about two inches, where it perforated the rectum and pierced obliquely upwards, through the coats of the bladder. We were enabled to trace its course thus far with the finger. We could detect no foreign substance in this extensive wound; though, from the appearance of the broken and uneven end of the stub, we were led to suspect that some pieces of it had been left; this eventually proved, however, not to be the case. The unhappy patient experienced the most excruciating agony, and in regard to a recovery, seemed to be in a hopeless condition. But nature, with the assistance of a few remedial agents, such as blood-letting, &c. performed a cure. For the first three or four days, his urine passed mostly through the wound; to prevent which, as well as to restore its natural course, recourse was had to the catheter. This, with the aid of other auxiliaries, soon restored the natural outlet, and the lacerated integuments gradually closed. I am principally indebted to my friend Dr. Judson for the foregoing history of the case, for I saw the patient but once. The Dr. informs me that the man has recovered his accustomed health and usefulness.

I think there is one practical illustration at least, which may be deduced from this case, that of the practicability of performing with success the operation of lithotomy through the same course. This method I have seen noticed as being preferable to the common mode; besides, it has been remarked, that when the operation has been performed in the usual way, and no stone found, it has generally proved fatal to the patient. The same objection might not hold, should there be no external incision, as would appear from the above case.

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Case of Ephidrosis Olens. By GEORGE F. LEHMAN, M. D.—J. B. a Portuguese seaman, aged 48 years, was admitted into the Quarantine Hospital, September 8th, 1828, from Wilmington, N. C. He had suffered an attack of remittent fever since the 20th of August.

Several doses of castor oil had been administered previously to his landing, all of which had been ejected in consequence of the irritability of the stomach.

When I saw him he was very much debilitated, pulse weak and small,—tongue and lips rather dry,—no fever,—mind much depressed with an assurance of death.—He recovered in a few days, upon the use of tonics and light nutritious diet.

On the 10th, in the evening, passing my hand over his forehead, which was covered with perspiration, and inadvertently pressing it on my eyes, which pained me at the time, I perceived a strong smell of garlic. I washed my hand and applied it to his breast, and the same smell was more distinct.

I ascertained that during the passage from Wilmington to the Lazaretto ground, he had eaten freely of garlic. Sixty hours however, had elapsed since he had tasted any.

On the morning of the 11th the same scent continued, and as he was costive, I gave him Ol. ricin. ℥ss., which operated four times. He was well washed all over, and clean body and bed clothes substituted for those in use.

On the 12th, 13th, and 14th, the garlicky smell remained strong, particularly in the perspiration of the axilla. It diminished gradually, but had not entirely evaporated on the 19th,—the day of his discharge.

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Sulphuric Ether in a case of Poisoning with Laudanum. By WILLIAM M. FAHNESTOCK, M. D.—August 10th, 1826, we were called to see A. L. who had taken two ounces of laudanum with the intent of terminating his existence. When we arrived we found him sinking very rapidly into a deep comatose state, still he resisted every effort to evacuate the poison. We attempted several times in vain to introduce the stomach pump, and continuing the resistance until he was quite exhausted, we were deterred from administering an emetic fearful of its insufficiency to eject the contents of the stomach, and of adding to the prostration of the system. Under these circumstances we forcibly inserted an iron spoon between the teeth, and poured nearly an half ounce of the sulphuric ether into the bowl of the spoon, which readily found its way to the pharynx, and part, perhaps into the stomach—which produced very violent strangulating sensations, and struggling with its suffocating effects, the stomach and diaphragm were thrown into action, and discharged a large quantity of the laudanum. Still dreading the sedative consequences of that which remained, we determined to repeat the dose, and succeeded in introducing a second portion nearly equal to the first, which had the happy effect of discharging the whole contents. The subsequent treatment was simply the ordinary attentions in these cases.

From the very powerful effect which the pure ether has upon the glottis, lungs, diaphragm, œsophagus and the contiguous parts, we are induced to believe that in such cases it may be resorted to with considerable confidence. The usual vegetable astringents, however, should not be neglected, as they may serve as valuable auxiliaries, and are absolutely necessary in the after treatment.

Datura Stramonium in Retention of Urine. By WILLIAM M. FAHNESTOCK, M. D.—The season is now rapidly approaching when persons of advanced age are very liable to retention of urine, from exposure to cold and dampness, occasioning enlargement of the prostate gland, and muscular contraction of the membraneous part of the urethra: and these frequently not only produce much inconvenience to the patient, but often very considerable embarrassment to the surgeon. The great sensibility of the parts, and their peculiar conformation render it very difficult to overcome the obstruction in the diseased state. Much of the obscurity in these cases however, arises from the want of a perfect knowledge of the minute anatomical structure, and an accurate acquaintance with the pathological state of the gland; and particularly the augmentation of the third lobe, which presents the chief difficulty in introducing the catheter: and which, by rashness, in pursuing the plan recommended by Desault, of pushing the catheter forcibly onward into the bladder, is frequently so extensively injured as to become the seat of permanent irritation, form a chronic enlargement, and prove an insurmountable barrier to all further efforts to restore it. Dr. Physick has very ingeniously contrived a bougie-pointed catheter, which can often be insinuated when other instruments cannot be passed; but even this is not practicable at all times.

Baffled in some inveterate cases which had sustained injury by injudicious treatment, we were led to try some relaxing medications to subdue the rigidity of the parts, and have succeeded so fully in a few cases with the stramonium, that we feel anxious to recommend it to the attention of the profession.

In the fall of 1825, we were called to see P. B. ætat. 74, who by exposure to cold and wet had been suffering some days with retention of urine arising from an enlargement of the prostate gland. A variety of applications had been made, as emollients, demulcents, fomentations, ice, &c. &c.; and great irritation had been excited by ineffectual attempts to introduce the catheter. The third lobe of the gland had been partially pierced, and become very tender: the least touch or pressure of the instrument would rupture its engorged vessels, and discharge profuse quantities of blood. The catheter was tried, but was arrested at the prostate gland; and being foiled in all our attempts with a variety of instruments, and in different positions, we ordered a large cataplasm of the leaves of the datura stramonium, and continued them three hours, after which we readily passed the catheter and drew off a large quantity of urine, mixed with a dark grumous fluid. The following day we encountered the same difficulty to the introduction of the instrument, but which yielded again in a few hours after the renewal of the stramonium. The catheter was now allowed to remain two days in the passage, but excited so much pain and irritation as to oblige us to remove it before we could subdue the disease, and were again reduced to our former dilemma; by persevering, however, with constant applications of the poultices, the disease was entirely removed and has not since returned.

Other similar cases have come under our observation, in the more advanced season, when the leaves could not be procured, under these circumstances we found a bath made of the seeds succeed admirably well. Cases attended with much pain and tenderness are very much relieved by blood-letting; and particularly by the application of leeches to the perinæum.

Might not the extract of belladonna applied daily in cases of chronic enlargement prove beneficial—or should we not expect an equally energetic operation from the nicotiana tabacum? This might be tried in cases of emergency.

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Case of Poison by Stramonium. By R. E. GRIFFITH, M. D.—Charles Lambert, ætat. 3, in consequence of eating a few seeds of this deleterious plant, was affected with the whole train of symptoms, generally attributed to its ingestion. He was not seen until about five hours after he had eaten them; at which time his sensorium was much disordered: there were strong convulsions alternating with great excitement of mind; the pupils of his eyes were so much dilated as

almost to obliterate the iris; pulse rapid and contracted; face and upper part of the body universally covered with a vivid erysipelatous redness, which gradually disappeared after venesection. This state of things continued for about fourteen hours, notwithstanding the activity of the remedial measures adopted. The restoration of his senses was sudden and unexpected. Three days afterwards his body became covered with an eruption resembling rubeola, except that it was more prominent; this eruption lasted about twelve hours. Several other children were seized in a similar manner from the same cause, all of whom recovered. We have noticed the above case from the singularity of the eruption, which wholly differed from that described by authors as arising from the ingestion of this poison.

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Notice of Two Children whose Bodies were united anteriorly, and Lived some time after Birth. By J. Wilson Moore, M. D. (Communicated in a letter to Dr. Hays.)—The following case may afford some interest to the profession, and as such I offer it for thy disposal.

On the 21st of the 5th month, 1829, I was requested by Dr. Thomas Barker, to visit with him, in company with my father, Dr. Robert Moore, a twin monster, which had been born that morning.

On examining the children they appeared to be two perfect females, united together by the lower part of the thorax and by the parietes of the abdomen as far as the umbilicus. They were about the ordinary size of seven months children, and appeared healthy, though feeble; one in particular more so than the other; they took nourishment freely, and the nurse informed us that their ejecta passed simultaneously.

The history received was, that the mother had gone her full time, and that no uncommon circumstance occurred to her that could account for the phenomenon. The accouchement was performed by Dr. Barker, who found a natural presentation, but from the circumstance of the labour being somewhat protracted, and her pains ineffectual, excited suspicion that all was not right, and on a more careful examination, he discovered the head of another child resting on the pubis, which not being able to return, he brought into the neck of the other, and the natural pains quickly effected delivery. There was but one umbilical cord, attached to a single placenta.

The children continued to live for twenty-four hours, during which period but very little change took place in the condition of the most vigorous, though the other seemed gradually to decline until the powers of life became exhausted, and at the same instant both ceased to breathe.

The next day, in presence of Drs. R. Moore, James, Shoemaker, B. H. Coates, H. Klapp, Barker, and one or two others, I made an examination of the thoracic and abdominal contents, by making an incision from the sternum along the linea semilunaris of each child. On raising the integuments it was discovered that a thin membranous partition existed, separating the contents of the two abdomens from each other, and extending from side to side, involving in its folds the umbilical vessels, which divided at the umbilicus, and entered the liver on each side at the fissure. These glands were firmly united so as to present the appearance of one entire viscus, though a line of division existed, along which, however, the union was so firm as not to be overcome with the handle of a knife. There was a gall bladder attached to each viscus.

On opening the thorax the lungs seemed natural, and on exposing the heart, (which was contained in a single pericardium,) it was found of an oblong and flattish appearance, having two aortas and two pulmonary arteries. The auricles and ventricles were small, and their formation not as satisfactorily ascertained as could have been wished.

Figure 1. of plate III. presents a drawing of the children as they were united together; it was made by an artist of this city, and presents a correct view of their connexion.

Figure 2. gives a view of the thoracic and abdominal contents as presented

Plate 3. Vol. 5.

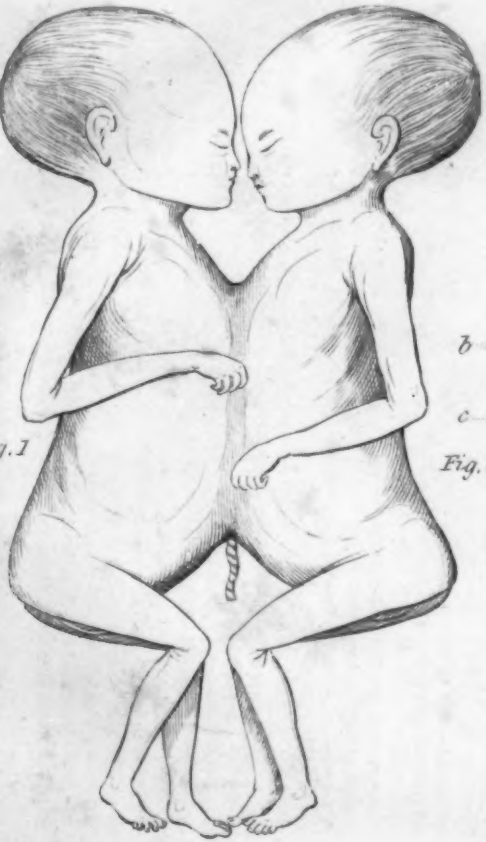

Fig. 1

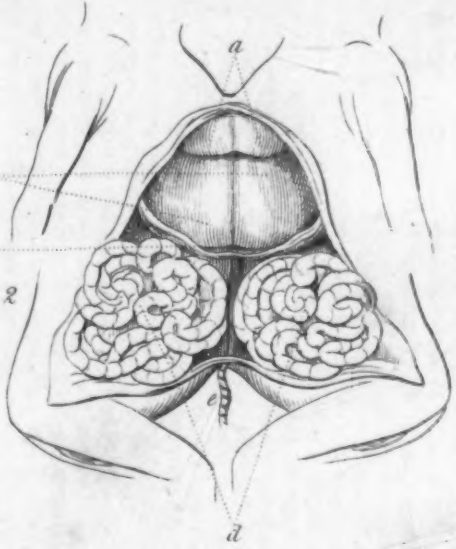

Fig. 2

Fig. 3

Siamese Youths.

Drawn by J. Drayton.

on dissection. *a.* The two hearts united. *b.* The two livers united. *c.* The omentums drawn up. *d.* The intestines. *e.* The umbilical cord—which contained a double set of vessels.

It is to be regretted that circumstances which are unnecessary to mention, prevented our ascertaining more satisfactorily the condition of the heart.

An Account of the Siamese Twin Brothers united together from their birth. By J. C. Warren, M. D. Professor of Anatomy and Surgery in Harvard Medical College. (With a plate.)

These boys were purchased of their mother, by Captain Coffin and Mr. Hunter, (the owners,) in a village of Siam, where they had subsisted in a state of poverty, from their birth. They were confined within certain limits by order of government, and supported themselves, principally by taking fish.

The boys are supposed to be about eighteen years old. They are of moderate stature; though not as tall as boys of that age in this country. They have the Chinese complexion and physiognomy. The forehead is more elevated and less broad than that of the Chinese, owing to malformation. They much resemble each other; yet not so much, but that on a little observation, various points of dissimilarity may be noticed.

The substance by which they are connected, is a mass two inches long at its upper edge, and about five at the lower. Its breadth from above downwards, may be four inches; and its thickness in a horizontal direction, two inches. Of course it is not a rounded cord, but thicker in the perpendicular than in the horizontal direction.—At its lower edge is perceived a single umbilicus, through which passed a single umbilical cord, to nourish both children in the fœtal state. Placing my hand on this substance, which I will denominate the cord, I was surprised to find it extremely hard. On further examination, this hardness was found to exist at the upper part of the cord only; and to be prolonged into the breast of each boy. Tracing it upwards, I found it to be constituted by a prolongation of the *ensiform cartilage of the sternum.* The breadth of this cartilage is an inch and a half; its thickness may be about the eighth of an inch. The cartilages proceeding from each sternum meet at an angle, and they seem to be connected by ligament so as to form a joint. This joint has a motion upwards and downwards, and also a lateral motion; the latter operating in such a way, that when the boys turn in either direction, the edges of the cartilage are found to open and shut. The lower face of this cartilage is concave; and under it is felt a rounded cord, which may be the remains of the umbilical cord. Besides this there is nothing remarkable felt in the connecting substance. I could distinguish no pulsating vessel.

The whole of this cord is covered by the skin. It is remarkably strong, and has no great sensibility; for they allow themselves to be pulled by a rope fastened to it, without exhibiting uneasiness. On ship board, one of them sometimes climbed on the capstain of the vessel, the other following as well as he could without complaining.

When I first visited the boys, I expected to see them pull on this cord in different directions, as their attention was attracted by different objects. I soon perceived that this did not happen. The slightest impulse of one to move in any direction, is immediately followed by the other; so that they would appear to be influenced by the same wish. This harmony in their movements is not the result of a volition, excited at the same moment. It is a habit formed by necessity. At an early period of life it is probable they sometimes differed. At present this is so rarely the case that the gentlemen who brought them, have noticed only a single instance. Having been accustomed to use the cold bath; one of them wished it when the weather was cool; to which the other objected. They were soon reconciled by the interference of the commander of the ship. They never hold a consultation as to their movements. In truth, I have rarely seen them speak to each other, although they converse constantly with a Siamese lad who is their companion. They always face in one direction; standing nearly side by side, and are not able, without inconvenience, to face in the opposite direction;

so that one is always at the right, the other at the left. Although not placed exactly in a parallel line, they are able to leap with surprising activity. On some occasions, a gentleman, in sport, pursued them round the ship, when they came suddenly to the hatchway, which had been inadvertently left open. The least check would have thrown them down the hatchway, and probably killed one or both; but they leaped over it without difficulty.

They are quite cheerful; appear intelligent; attending to whatever is presented to them, and readily acknowledging any civility.—As a proof of their intelligence, it is stated, that in a few days they learned to play at drafts well enough to become antagonists of those who had long been versed in the game. They sometimes play with each other; and it has been noticed, that when one made a bad move, the other would sometimes correct it, and propose it should be taken back. They differ in intellectual vigour. The perceptions of one are more acute than those of the other; and there is a corresponding coincidence in moral qualities. He who appears most intelligent, is somewhat irritable in temper, while the disposition of the other is extremely mild.

The connexion between these boys might present an opportunity for some interesting observations, in regard to physiology and pathology. There is, no doubt, a net-work of blood-vessels, lymphatics and some minute nerves passing from one to the other. How far these parts are capable of transmitting the action of medicines, and of diseases, and especially of what particular medicines, and what diseases, are points well worthy of investigation. Captain Coffin informed me, that they had never taken medicine since they had been under his care. Once they were ill from eating too heartily, but were relieved by the efforts of nature. He thinks that any indisposition of one extends to the other, that they are inclined to sleep at the same time; eat about the same quantity, and perform other acts with great similarity. Both he and Mr. Hunter, the gentleman who united with him in bringing them here, are of opinion that touching one of them when they are asleep, awakens both. When they are awake, an impulse given to one, does not in the least affect the other. There is evidently no impression received by him who is not touched. Of course the opinion just mentioned, is undoubtedly erroneous. The slightest movement of one is so speedily perceived by the other, as to deceive those who have not observed closely.—There is no part of them, which has a common perception, excepting the middle of the connecting cord and a space near it. When a pointed instrument is applied precisely in the middle of the cord, it is felt by both; and also for about an inch on each side; beyond which the impression is limited to the individual of the side touched.

As to the influence of medicines, taken by one, on the body of the other, it would, I suppose, be inconsiderable; since the vascular and nervous communications must be very limited. The same remark may be applied to most diseases. I do suppose that a febrile affection, slight in degree, would extend from the one to the other. How it would be with a continued fever, appears to me uncertain. But such diseases as are communicable through the absorbent vessels, or capillary blood-vessels, would readily pass from one system to the other; as for example, the morbid poisons, syphilis, cow-pox, small-pox, &c.

Those who have resided with them say, that the alvine and urinary evacuations take place at about the same intervals in both, though not at the same time. In the function of the circulation, there is a more remarkable uniformity in the two bodies. The pulsations of the hearts of both coincide exactly, under ordinary circumstances. I counted seventy-three pulsations in a minute while they were sitting; counting first in one boy, then in the other. I then placed my fingers on an arm of each boy, and found the pulsations take place exactly together. One of them stooping suddenly to look at my watch, his pulse became much quicker than that of the other; but after he had returned to his former posture, in about a quarter of a minute, his pulse was precisely like that of the other boy. This happened repeatedly. Their respirations are, of consequence, simultaneous.

This harmony of action in primary functions, shows a reciprocal influence,

Statement of Deaths, with the Diseases and Ages, in the City and Liberties of Philadelphia, from the 1st of January, 1827, to the 1st of January, 1828.

which may lead to curious observations and important deductions. Observations to be useful, would require much time and great accuracy.

Among the curious questions which have arisen in regard to these individuals, one has been made as to the moral identity of the two persons. There is no reason to doubt that the intellectual operations of the two are as perfectly distinct, as those of any two individuals, who might be accidentally confined together. Whether similarity of education and identity of position, as to external objects have inspired them with any extraordinary sameness of mental action, I am unable to say; any further, at least, than that they seem to agree, in their habits and tastes.

Another question which has presented itself in relation to them, is, whether it would be possible to separate them from each other with safety. There seems to me nothing in the connecting medium which would render such an operation necessarily fatal. It is not improbable that the peritoneum is continuous from the abdomen of one to that of the other. The division of this membrane would involve some danger though not very considerable. The attempt to separate them, does not however, appear to me to be authorized under existing circumstances. Surgeons are justified in putting the life of an individual at risk, when it becomes necessary in order to relieve him of a menacing disease; but it would not be proper to hazard life in order to procure some convenience, however desirable this might be. When the minds of these boys have been sufficiently cultivated to enable them to understand the nature and dangers of an operation; and the advantages they would derive from it, the subject might be presented to them; and if, with a full knowledge of the consequences, they desired and demanded the separation to be effected, it might be proper to undertake it. Should one die before the other, they should be cut apart immediately. The success of the operation would, of course, be affected by the nature of the mortal disease, and its influenee on the constitution of the survivor.

A union of the bodies of twins by various parts, is not an unusual occurrence. The collections of anatomists present many such objects. Ambrose Paré has depicted for the entertainment of his readers, instances of union by the back, belly and forehead. The last occurred in two girls who lived to the age of ten years, when one of them dying a separation was made; the wound of the living girl assumed a bad character, and soon proved fatal. The Hungarian sisters, who lived about a century since, were united by the back; had one passage from the intestines, and one from the urinary organs. They died when they were twenty-two years of age. In the Philosophical Transactions and various other works, a multitude of similar monstrosities are recorded; most of them born dead, or dying soon after birth.

The Siamese boys, present, I believe, the most remarkable case of this *lusus naturæ*, which has yet been known, taking into view the perfection and distinctness of their organization, and the length of time they have lived. Their health is at present good; but it is probable that the change of their simple habits of living, for the luxuries they now obtain, together with the confinement their situation necessarily involves, will bring their lives to a close within a few years.

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Ligature of the Carotid for Anastomosing Aneurism in a Child three months old.—By a letter from a medical friend in New York, we are informed that Professor Mott has recently taken up the carotid artery in a child *three months* old, for the removal of a tremendous anastomosing aneurism, extending across the nose from canthus to canthus, covering the nose to its extremity, and also reaching upon the forehead. The child had recovered from this operation when the letter was written, and was in a few days to have had the carotid of the other side taken up. This has most probably been done, and we hope to give a detailed account of the case in our next number.

Statement of Deaths, with the Diseases and Ages, in the City and Liberties of Philadelphia, from the 1st of January, 1827, to the 1st of January, 1828.

DISEASES.	Under 1 year.	From 1 to 2.	From 2 to 5.	From 5 to 10.	From 10 to 15.	From 15 to 20.	From 20 to 30.	From 30 to 40.	From 40 to 50.	From 50 to 60.	From 60 to 70.	From 70 to 80.	From 80 to 90.	From 90 to 100.	From 100 to 110.	TOTALS.
Atrophy	17	8	3	1	0	0	0	0	3	4	1	1	1	0	0	39
Abscess	2	0	1	2	0	3	2	3	3	0	3	2	0	0	0	21
Asthma	0	0	0	1	0	0	0	1	1	2	3	5	1	1	0	15
Apoplexy	0	0	0	1	1	0	3	8	11	11	7	3	1	1	0	47
Aphthæ	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
Aneurism	0	0	0	0	0	0	1	0	1	2	0	1	0	0	0	5
Burns	3	2	6	1	0	2	2	2	3	1	1	0	0	0	0	23
Bronchitis	3	1	1	0	0	0	2	0	3	0	0	1	0	0	0	11
Consumption	10	3	18	8	6	34	129	153	87	39	25	10	1	0	0	523
Convulsions	177	30	18	12	1	1	2	12	11	1	2	1	0	0	0	268
Casualties	3	2	1	2	3	2	2	5	1	0	0	0	1	0	0	22
Catarrh	49	14	5	2	3	1	0	2	1	2	0	2	1	2	0	84
Colic	2	1	0	0	0	1	3	2	0	1	1	1	0	0	0	12
Cachexy	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
Childbed	0	0	0	0	0	1	4	3	0	0	0	0	0	0	0	8
Cancer	0	0	0	0	0	0	0	3	7	10	3	0	1	0	0	24
Concussion	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
Caries	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	2
Contusion	1	0	1	0	0	0	1	0	0	1	0	0	0	0	0	4
Cholera	160	61	8	0	0	1	1	5	1	1	1	0	0	0	0	239
Coup de soleil	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
Debility	105	18	11	5	0	0	4	10	11	9	11	13	9	0	1	207
Dropsy	0	1	3	3	2	4	12	17	13	15	5	6	2	0	0	83
of the Breast	0	0	0	1	0	0	4	3	5	8	2	2	3	1	0	29
in the Head	27	35	25	18	1	0	0	0	1	0	0	0	0	0	0	107
Dysentery	14	8	3	5	1	0	3	7	6	6	3	1	1	0	0	58
Diarrhœa	29	5	1	0	0	1	4	11	6	9	9	9	2	1	0	87
Drunkenness	0	0	0	0	0	2	16	15	11	5	3	1	0	0	0	53
Death by opium	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
Dyspepsia	0	0	0	0	0	1	1	2	0	1	1	0	1	0	0	7
Decay	3	0	0	0	1	0	0	3	3	2	7	2	0	0	0	21
Diseased spine	0	0	0	0	2	0	1	1	0	0	0	0	0	0	0	4
Disease of the heart	4	0	0	1	2	0	2	0	1	1	0	1	0	0	0	12
Drinking cold water	0	0	0	0	2	0	0	1	1	0	0	0	0	0	0	2
Drowned	0	0	0	6	2	4	9	13	9	3	0	0	0	0	0	46
Disease of the hip joint	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Eruptions	6	2	0	0	0	0	0	1	1	0	0	0	0	0	0	10
Erysipelas	2	0	1	0	0	0	0	1	0	1	1	0	0	0	0	6
Epilepsy	2	0	1	0	0	2	1	1	1	1	1	0	0	0	0	10
Fractures	0	0	0	0	0	0	1	2	1	0	0	1	0	0	0	5
Found Dead	5	0	0	2	0	0	2	6	7	1	0	0	0	0	0	23
Fungus hæmatodes	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
Fever	13	6	5	14	6	7	17	18	6	10	4	5	2	0	0	113
Bilious	1	1	1	3	1	6	20	10	6	2	2	1	0	0	0	54
Remittent	1	5	5	5	4	5	19	12	9	6	4	4	0	0	0	79
Typhus	0	0	1	3	3	10	22	19	15	12	4	3	0	0	0	92
Intermittent	1	1	1	2	0	1	2	1	2	2	1	0	0	0	0	14
Inflammatory	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
Nervous	0	1	0	0	3	2	1	3	1	1	0	0	0	0	0	12
Hectic	0	0	0	1	0	0	0	1	1	0	0	0	1	0	0	4
Scarlet	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
Puerperal	0	0	0	0	0	2	2	5	1	0	0	0	0	0	0	10
Gout	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	4
Carried over	647	206	120	100	43	94	296	363	255	171	107	76	28	6	1	2513

DISEASES.	Under 1 year.	From 1 to 2.	From 2 to 5.	From 5 to 10.	From 10 to 15.	From 15 to 20.	From 20 to 30.	From 30 to 40.	From 40 to 50.	From 50 to 60.	From 60 to 70.	From 70 to 80.	From 80 to 90.	From 90 to 100.	From 100 to 110.	TOTALS.
Brought over - -	647	206	120	100	43	94	296	363	255	171	107	76	28	6	1	2513
Gangrene - - -	0	1	7	1	1	0	0	1	0	0	0	0	0	0	0	11
Hysteritis - - -	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
Hives - - - -	24	17	18	3	1	1	0	0	0	0	0	0	0	0	0	64
Hooping cough - -	28	11	9	3	0	0	0	0	0	0	0	0	0	0	0	51
Hæmorrhage - - -	2	0	0	0	1	3	8	7	5	2	1	0	0	0	0	29
Hernia - - - -	0	1	0	0	0	0	1	0	0	0	1	1	1	0	0	5
Insolation - - -	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
Injured spine - - -	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
Inflammation of the Lungs	43	10	11	2	1	5	18	20	8	13	7	4	2	0	0	144
Bowels - -	17	4	5	1	7	9	8	9	2	5	1	1	0	0	0	69
Brain - - -	8	5	8	3	5	5	7	8	3	0	2	1	0	0	0	55
Breast - - -	4	2	3	0	0	0	0	1	0	1	1	2	0	0	0	14
Stomach - -	2	2	3	0	0	4	6	7	3	2	1	0	0	0	0	30
Liver - - -	2	2	2	0	0	0	6	15	7	3	4	0	0	0	0	41
Spleen - - -	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
Peritoneum - -	0	0	1	2	0	0	1	1	0	1	0	0	0	0	0	7
Heart - - -	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	2
Bladder - -	0	0	0	0	0	0	1	0	0	0	1	2	0	0	0	4
Prostate Gland -	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	2
Insanity - - - -	0	0	0	0	0	0	1	1	2	2	0	0	0	0	0	6
Jaundice - - -	2	0	1	0	1	0	1	1	1	0	1	0	0	0	0	8
Locked jaw - - -	1	0	0	0	3	0	4	2	0	1	0	0	0	0	0	10
Laudanum to excess -	0	0	0	0	0	0	2	0	0	0	1	0	0	0	0	3
Mania a potu - - -	0	0	0	0	0	0	9	37	12	6	5	0	0	0	0	69
Measles - - - -	1	3	4	1	0	0	0	0	0	0	0	0	0	0	0	9
Mortification - - -	1	0	1	1	0	0	3	4	0	2	1	3	0	1	0	17
Old age - - - -	0	0	0	0	0	0	0	0	0	0	1	24	33	15	3	76
Osteo sarcoma - -	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
Palsy - - - -	0	0	0	0	2	0	1	4	4	4	4	9	3	0	0	31
Pleurisy - - - -	0	0	0	0	0	0	1	3	2	4	0	2	0	0	0	12
Phlegmasia dolens - -	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
Perished of cold - -	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
Rheumatism - - -	0	0	0	1	0	0	1	1	0	0	1	0	0	0	0	4
Rickets - - - -	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
Still-born - - -	286	0	0	0	0	0	0	0	0	0	0	0	0	0	0	286
Sudden - - - -	7	2	0	0	0	0	6	17	20	7	5	3	0	0	0	67
Small-pox - - -	12	4	13	5	3	1	35	14	9	1	3	0	0	0	0	100
Syphilis - - - -	0	0	0	0	0	0	0	2	1	0	0	0	0	0	0	3
Suicide - - - -	0	0	0	0	0	0	3	1	0	0	0	0	0	0	0	4
Sore throat - - -	1	0	1	3	1	0	1	0	2	0	0	0	0	0	0	9
Spasms - - - -	2	0	0	0	0	0	1	1	0	1	0	0	0	0	0	5
Scrofula - - - -	5	4	3	1	2	3	2	0	0	2	0	0	0	0	0	22
Stone - - - -	0	1	0	0	0	0	0	1	1	0	0	0	0	0	0	3
Spina bifida - - -	2	0	0	0	1	0	0	0	0	0	0	0	0	0	0	3
Stricture - - -	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
Tumours - - -	0	0	0	0	0	0	1	0	3	3	3	0	0	0	0	10
Tympanitis - - -	1	0	0	0	0	0	1	1	0	0	0	0	0	0	0	3
Thrush - - - -	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Teething - - -	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Ulcers - - - -	0	0	0	0	1	0	4	2	1	1	1	0	0	0	0	11
Violence - - -	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
Worms - - - -	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	4
Wounds - - - -	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	2
Unknown - - -	35	14	3	2	1	1	13	13	16	7	5	1	0	0	0	111
	1136	293	215	131	74	128	444	515	364	264	157	131	67	22	4	3945

Of the foregoing there were Males of 20 years and upwards, 1152; 1026 under 20 years; 845 Females of 20 years and upwards; 922 under 20 years.

There were 443 returns received at the Health Office of persons who died in the Alms-house of the City during the year; and 757 People of Colour are included in the statement of interments.

Deaths in each month of the within period.

	Adults.	Children.	Total.
January	176	137	313
February	138	149	287
March	156	149	305
April	130	145	275
May	178	116	294
June	116	176	292
July	148	267	415
August	218	242	450
September	145	142	287
October	216	149	365
November	203	144	347
December	172	133	305
	1996	1949	3945

Agreeably to returns made and collected from 127 Practitioners of Midwifery, there have been born in the City and Liberties, from the 1st of January, 1827, to the 1st of January, 1828, 3581 Male, and 3452 Female children; making the total number of births, 7033; leaving a difference between the births and interments for the year, of 3088.

By order of the Board of Health,

JOSEPH PRYOR, *Clerk.*

Health Office, Philadelphia, January 1, 1828.

Observations upon the Bill of Mortality for 1827.—In comparing the bill of mortality for 1827, with that of the preceding year, we find the total amount of deaths less by 306, still-born included. The chief diminution appears under the head of fevers; the deaths from which in 1826 were 421, whereas the amount from this source in the present year is only 219. A less number of deaths likewise appears under the heads of Consumption, Bowel complaints, Dropsies, Croup, Inflammations, Measles, and some others. Small-pox is the principal disease which presents an increased mortality; which increase, however, is more than overbalanced by the diminution in the deaths from measles. The mortality of adults, or those of 20 years and upwards, is nearly equal to the amount of deaths under that period.

The greatest mortality was in August, when the number of deaths amounted to 450; the smallest in April, when it was only 275. The other months stand as follows, beginning with the highest: viz. July, October, November, January, December, March, May, June, February, September.

Leaving the still-born out of the estimate, the births exceed the deaths 3374, being as 7200 to 3659.

Statement of Deaths, with the Diseases and Ages, in the City and Liberties of Philadelphia, from the 1st of January, 1828, to the 1st of January, 1829.

DISEASES.	Under 1 year.	From 1 to 2.	From 2 to 5.	From 5 to 10.	From 10 to 15.	From 15 to 20.	From 20 to 30.	From 30 to 40.	From 40 to 50.	From 50 to 60.	From 60 to 70.	From 70 to 80.	From 80 to 90.	From 90 to 100.	From 100 to 110.	From 110 to 120.	TOTALS.
Aphthæa	2	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	5
Atrophy	16	5	7	1	1	1	0	0	2	1	1	2	1	0	0	0	38
Abscess	1	1	0	0	1	3	2	7	3	2	1	0	1	0	0	0	22
Apoplexy	2	0	0	0	0	2	1	8	13	8	8	3	1	0	0	0	46
Angina pectoris	0	0	0	0	0	0	1	1	1	0	0	2	0	0	0	0	5
Asthma	0	0	0	0	1	0	1	1	0	4	4	1	2	1	0	0	13
Aneurism	0	0	0	0	0	1	2	2	1	0	0	0	0	0	0	0	7
Burns	0	2	7	6	1	0	2	2	0	1	0	0	0	0	0	0	21
Bronchitis	9	6	2	0	0	1	0	0	3	1	1	3	1	0	0	0	27
Consumption	17	10	11	15	9	33	164	133	92	46	31	18	2	0	0	0	581
Convulsions	169	56	49	17	2	2	6	4	5	1	3	0	1	0	0	0	315
Catarrh	32	8	7	1	0	2	0	0	0	1	0	0	0	0	0	0	49
Casualties	3	0	0	0	2	2	4	3	3	0	2	0	0	0	0	0	19
Contusion	0	0	0	0	2	0	0	1	1	1	1	0	0	0	0	0	6
Cholera	180	92	10	2	1	0	1	3	1	1	0	0	0	0	0	0	291
Cancer	0	0	0	1	0	1	1	2	3	4	6	0	0	0	0	0	18
Compression of the Brain	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	2
Carios	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Chorea Sancti Viti	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	1
Colic	2	0	0	0	0	0	0	1	2	0	1	0	0	0	0	0	6
Cachexy	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	3
Coup de soleil	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	2
Childbed	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	3
Debility	131	33	26	5	5	1	7	6	9	10	16	30	7	0	0	0	286
Decay	1	0	0	1	2	1	2	2	2	1	2	3	0	1	0	0	16
Dropsy	2	2	3	2	0	1	3	11	15	22	17	4	10	5	0	0	97
of the Breast	1	0	1	0	0	1	11	7	10	7	7	1	0	0	0	0	46
in the Head	45	24	29	10	0	0	2	0	0	0	0	0	0	0	0	0	110
Dysentery	14	6	6	3	0	1	5	2	4	1	3	3	2	0	0	0	50
Diarrhœa	29	17	10	2	0	0	2	4	5	5	6	6	3	0	0	0	89
Drowned	0	0	1	5	3	2	9	12	16	4	1	0	0	0	0	0	53
Drunkenness	0	0	0	0	0	0	2	11	12	1	4	0	0	0	0	0	30
Dyspepsia	0	0	0	0	0	0	0	1	1	0	0	0	1	0	0	0	3
Drinking cold water	0	0	0	0	0	0	2	1	2	0	0	0	0	0	0	0	5
Diabetes	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	2
Disease of the Heart	6	0	0	0	0	2	5	0	5	1	1	0	0	0	0	0	20
of the Hip-joint	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
of the Spine	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
Epilepsy	1	0	1	1	2	1	1	4	3	1	0	2	0	0	0	0	17
Eruptions	5	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
Erysipelas	1	0	0	1	1	0	0	0	0	0	0	1	0	0	0	0	4
Fracture	0	1	0	0	0	0	0	2	2	1	1	1	0	0	0	0	9
Found dead	13	0	0	0	0	0	2	6	5	3	0	0	0	0	1	0	29
Fungus hæmatodes	0	0	0	0	0	1	0	0	0	0	2	1	0	0	0	0	4
Fever	8	6	9	7	6	8	22	21	11	11	7	0	2	0	0	0	118
Bilious	3	4	4	7	5	5	27	20	9	5	9	6	1	0	0	0	105
Typhus	0	0	0	2	4	4	11	10	5	5	4	0	1	0	0	0	46
Intermittent	4	2	2	2	0	0	4	2	2	1	0	0	2	0	0	0	21
Remittent	7	5	6	1	3	5	20	9	5	2	2	1	2	0	0	0	68
Inflammatory	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	2
Hectic	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	2
Puerperal	0	0	0	0	0	0	5	2	0	0	0	0	0	0	0	0	7
Nervous	0	0	0	1	0	0	6	1	1	2	2	0	0	0	0	0	13
Carried over	705	282	192	96	51	82	343	312	264	150	132	94	36	1	1	0	2741

DISEASES.	Under 1 year.	From 1 to 2.	From 2 to 5.	From 5 to 10.	From 10 to 15.	From 15 to 20.	From 20 to 30.	From 30 to 40.	From 40 to 50.	From 50 to 60.	From 60 to 70.	From 70 to 80.	From 80 to 90.	From 90 to 100.	From 100 to 110.	From 110 to 120.	TOTALS.
Brought over - -	705	282	192	96	51	82	343	312	264	150	132	94	36	1	1	0	2741
Gout - - - -	0	0	0	0	0	0	0	0	1	1	2	2	0	0	0	0	6
Gangrene - - -	1	1	6	1	1	0	0	0	1	0	0	0	0	0	0	0	11
Gun-shot wound -	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	2
Hernia - - -	1	0	0	0	0	0	0	0	0	1	2	0	0	0	0	0	4
Hives - - -	28	11	25	7	0	0	0	0	0	0	0	0	0	0	0	0	71
Hooping cough - -	29	13	11	4	0	0	0	0	0	0	0	0	0	0	0	0	57
Hæmorrhage - -	0	0	0	0	0	1	8	9	3	1	1	0	0	0	0	0	23
Insanity - - -	0	0	0	0	0	1	3	8	1	1	3	0	0	0	0	0	17
Inflammation of the Breast	7	1	0	1	0	0	0	1	0	0	1	1	1	0	0	0	13
Lungs - -	37	8	16	8	3	3	15	17	6	7	5	4	1	0	0	0	130
Stomach - -	7	2	1	1	0	1	5	3	7	2	3	4	0	0	0	0	36
Brain - -	6	6	5	7	3	5	12	10	6	3	3	2	0	0	0	0	68
Bowels - -	24	8	6	3	5	3	7	10	8	7	4	2	1	0	0	0	88
Liver - -	1	2	5	1	1	1	8	10	4	2	1	1	2	0	0	0	39
Peritoneum -	0	0	1	1	0	2	5	3	1	0	3	1	2	0	0	0	19
Kidneys - -	0	0	0	0	0	0	0	0	0	2	1	1	0	0	0	0	4
Bladder - -	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
Heart - -	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	2
Knee-joint -	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
Uterus - -	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
Jaundice - - -	0	1	0	0	0	0	1	2	0	0	1	2	2	0	0	0	11
Locked jaw - -	1	0	0	0	1	0	1	1	0	0	0	0	0	0	0	0	4
Laudanum to excess -	0	0	1	0	0	0	4	1	3	0	0	0	0	0	0	0	9
Measles - - -	12	21	21	3	0	0	1	0	0	0	0	0	0	0	0	0	58
Mortification - -	2	1	0	2	0	0	0	3	0	1	1	2	0	0	0	0	12
Mania a potu - -	0	0	0	0	0	0	18	29	24	8	3	0	0	0	0	0	82
Old Age - - -	0	0	0	0	0	0	0	0	0	0	2	14	36	8	1	3	64
Palsy - - - -	0	0	0	0	0	0	2	6	2	6	8	13	4	0	0	0	41
Pleurisy - - -	0	0	0	0	0	0	2	3	0	0	0	0	0	0	0	0	5
Phlegmasia dolens -	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
Rheumatism - -	0	0	0	0	1	0	0	1	1	1	1	1	1	1	0	0	8
Still-born - - -	321	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	321
Sudden - - -	4	1	1	1	0	1	3	12	16	2	10	2	1	1	0	0	55
Suffocation - -	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	2
Suicide - - -	0	0	0	0	0	0	0	1	4	1	1	0	0	0	0	0	7
Stone - - - -	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	2
Scrofula - - -	6	1	2	1	1	1	1	0	1	0	0	0	0	0	0	0	14
Small-pox - - -	17	3	18	5	1	7	38	8	5	2	0	2	0	1	0	0	107
Sore throat - -	3	2	1	1	0	0	1	3	3	1	1	0	0	0	0	0	16
Spina bifida - -	1	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	3
Stricture - - -	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
Syphilis - - -	3	1	0	0	2	0	1	0	0	0	0	0	0	0	0	0	7
Tubercles of the brain	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
Tumours - - -	0	0	0	1	0	1	1	2	0	5	1	0	0	0	0	0	11
Teething - - -	1	5	1	0	0	0	0	0	0	0	0	0	0	0	0	0	7
Ulcers - - -	1	1	0	2	0	1	4	5	3	2	0	0	0	0	0	0	19
Violence - - -	1	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	3
Varioloid - - -	5	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	7
Vomiting - - -	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Worms - - -	0	1	1	1	0	1	0	0	1	0	0	0	0	0	0	0	4
Wounds - - -	0	0	0	0	0	0	2	1	1	0	0	0	0	0	0	0	4
Unknown - - -	26	22	1	1	0	1	6	5	4	0	2	0	3	0	0	0	71
	1254	395	329	148	70	113	498	459	372	206	191	150	90	12	2	3	4292

Of the foregoing there were Males of 20 years and upwards, 1166; 1204 under 20 years; 855 Females of 20 years and upwards; and 1067 under 20 years.

There were 356 returns received at the Health Office of persons who died in the Alms-house of the City during the year; and 706 People of Colour are included in the statement of interments.

Deaths in each month of the within period.

	Adults.	Children.	Total.
January	200	161	361
February	143	129	272
March	141	151	292
April	185	133	318
May	123	129	252
June	140	203	343
July	184	385	569
August	168	247	415
September	253	228	481
October	195	195	390
November	139	160	299
December	144	156	300
	2015	2277	4292

Agreeably to returns made to the Health Office, and collected from 137 Practitioners of Midwifery, there have been born in the City and Liberties, from the 1st of January, 1828, to the 31st of December, 1828, 3694 Male, and 3506 Female children; making the total number of births, 7200; leaving a difference between the births and interments of 2908.

By order of the Board of Health,

JOSEPH PRYOR, *Clerk.*

Health Office, Philadelphia, January 1, 1829.

Observations upon the Bill of Mortality for 1828.—This bill shows an increase in the mortality of 1828 over that of the preceding year, amounting to 347, which sum is chiefly made up by the greater number of deaths recorded under the heads of Consumption, Convulsions, Bowel complaints, Dropsies, Inflammations, Measles, and Small-pox. The mortality of children under 10, considerably exceeded the number of deaths which occurred at all other periods of life. The month in which the greatest mortality occurred was July, during which there died 184 adults, and 385 children, in all 569; that which offers the smallest amount of deaths is May, in which month there died 123 adults, and 129 children, in all 252. The other months, arranged according to their respective degrees of mortality, beginning with the highest, would stand in the following order: viz. September, August, October, January, June, April, December, November, March, February.

The number of births registered was 7200, which amount is 3229 greater than that of the mortality.

Mercury detected in Swaim's Panacea.—Extract of a letter from Richard Emmons, M. D. of Great Crossing, Kentucky, to the Editors. "I notice in your August No. that mercury has been detected in Swaim's Panacea. This is no new intelligence to me. A Mrs. B. a neighbour of mine, took several bottles of the panacea for a scrofulous ulcer of the throat. The remedy produced no abatement of the disease. After using up one of the bottles, small globules of quicksilver were seen rolling over the bottom of it.

"It was very warm weather when the quicksilver was discovered precipitated at the bottom of the bottle, hence I have no doubt but that the panacea had experienced at least a partial fermentation. The patient, Mrs. B., was compelled to scald one of her bottles in order to preserve it."

—

Solution of the White Oxide of Arsenic and Tartar Emetic in Herpes, &c.—Dr. Richard Emmons, of Kentucky, writes to us, that he has used a saturated solution of the white oxide of arsenic, with tartar emetic, half an ounce of the former to ten grains of the latter, with complete success in a few cases of herpes; and he suggests its use in obstinate cutaneous diseases. The remedy should be used with caution. Dr. E. does not inform us how his arsenical solution is made.

—

Bark of the Root of the Lynn or Wahoo, (Ulmus alata, Mich.) as a Poultice.—Dr. W. F. Luckie, of Clinton, Mississippi, writes to us that he has for some eight or ten years been in the habit of using this application to all the varieties of phlegmonous inflammation, with remarkable success. In cases of erysipelas, burns, bruises, contusions, and wounds of various descriptions, he has used it to the exclusion nearly of all other local applications, with great advantage. The way to prepare the poultice is to take the root of young trees, and after removing the cuticle from the bark, to scrape off the bark, and add a sufficiency of cold water to make it into a soft uniform pulp, which should be spread on cloth at least an inch thick, and sufficiently large to cover the whole of the inflamed part. The poultice should be renewed three or four times a day.

NECROLOGY.

Died, May 18, 1829, at his residence in Dumfries, Va. near the banks of the Potowmac river, John Spence, M. D. aged sixty-three years, one of the Collaborators of the American Journal of the Medical Sciences.

This gentleman, for nearly forty years, enjoyed in the section of Virginia in which he lived, the highest reputation as a judicious and successful practitioner; and has contributed in no small degree to the present scientific state of medicine in this country, by presenting the example of an indefatigable and accomplished student, almost to the close of his existence; and by his original contributions to the pages of medical journals.

Upon the first introduction of the vaccine disease into the United States, his attention was closely bestowed upon it, and in a short time he became satisfied of its really possessing those prophylactic powers, attributed to it by its renowned discoverer. His zeal in the cause, his general intelligence and polish as a scholar, and his established reputation in medicine, inspired the public with such confidence in his judgment, as soon enabled him to extend the benefit of his convictions not only throughout his own region, but to the more distant points of Virginia and of the adjoining states. He was on this momentous occasion, while public opinion yet remained undetermined, a luminary in the path of science; and though he reflected a light derived from a more lustrous source, yet he contributed in no small degree to its extension. The journals and publications of that day, attest sufficiently the spirit of apostleship with which he was inspired by the new doctrine, and his efficiency in the cause. He remained to the time of his death a devoted believer in the same cause, and from repeated and varied experiments, had satisfied himself so fully on the

subject, that the slightest doubt of genuine vaccina being a protector from variola, was to him a heresy in medicine of the most monstrous and unpardonable kind.

His next considerable contribution to his profession, was a report of a trial in some cases of pulmonary hæmorrhage, of the remedial efficacy of digitalis. His experiments were attended with success, and assisted much the reputation of that article while its day lasted. He continued to use digitalis while he lived, and was much prepossessed in favour of it, in pulmonary affections, and in dropsies, also in some cases of chronic catarrh. He understood thoroughly its powers, and knew well how to select what was active from what was inert. He thought that it had got into an unmerited disuse, and that practitioners had been disappointed in its efficiency, in consequence of their inattention to the proper rules of curing and keeping it. Himself a victim to ascites and anasarca, he succeeded repeatedly in removing the water by its use.

In the year 1806, he carried on an interesting correspondence with the late distinguished Dr. Benjamin Rush, on the successful treatment of a case of puerperal mania. This correspondence is published in the Medical Museum of Philadelphia.

Last year he presented a valuable paper to this journal, on the efficacy of a sea voyage in arresting pulmonary consumption in his own person, when he was a young man. Having given this brief and imperfect sketch of his scientific labours, which are generally to be found in the Medical Museum of Dr. Coxe, and in Miller's Medical Repository of New York, we may proceed to say something of his personal history.

Dr. Spence was a native of Scotland, and spent five years in the University of Edinburgh, when its reputation was illustrated by the lectures of Cullen, Black, and Munro. Being fully qualified to graduate, he was presented by symptoms of pulmonary consumption, and was advised by his preceptors to take immediately a long sea voyage. The res angustæ domi, which have been so efficient in the nurture of genius, prevailing in his domestic circle, prevented him from adopting a course more gratifying to his feelings, and he was induced to accept, in the year 1788, the offer of a private tutorship in a family residing in Dumfries, Virginia. At the same moment he had an offer of a promising professional appointment in St. Petersburgh, which has since turned out very advantageous in reputation and emolument to its occupant, but the alarming situation of his health induced him to prefer the more genial climate of the United States. His accomplishments as a Latin and Greek scholar made him a very acceptable member, as tutor, in a numerous family, the head of which felt the full value of bestowing a good education on his children.

The voyage saved his life, and upon the expiration of his engagement, he assumed, in 1791, the practice of a profession in which he had been highly educated, and to which he was much attached. From many of his countrymen residing in the place, and most of its families being of Scottish descent, he was in a short time fixed in a highly advantageous business. Dumfries, though now deserted by commerce, and in decay, was at that time in the full tide of prosperity, from a most valuable tobacco trade to Europe, and especially to Glasgow. The national feelings of the doctor's countrymen, and their liberal remuneration of his professional services, secured for him in a few years an independence.

His well merited distinction, together with a consideration for the circumstances under which he had left the University of Edinburgh, induced the Medical Faculty of the University of Pennsylvania, to concur unanimously in an application to the board of trustees to confer upon him the honorary degree of doctor of medicine, which was accordingly complied with at the commencement in July, 1828.

Our colleague was much attached to the theories and modes of practice in which he had been educated. Having imbibed his first principles in the school of Cullen and under his immediate teaching, they never were obliterated from

his mind, and were to him the infallible evidences and tests of medical soundness and truth. In a letter to a correspondent of a recent date, he says: "your devotedness to French pathology may lead you into error, you may thereby run the risk of the young advocate of Brown's system, that of a charge of servility and the want of original eclectic power. I fear the consequences of the present rage for this ultra French pathology, which seems to rest almost every thing on a hypothetical basis. In these remarks I confine myself to the doctrine of idiopathic fever—of gastro-enteritis.

"When John Brown published his Elementæ Medicinæ, referring all diseases to tonic and atonic, he observed that the bilious remittent fever of hot climates was a disease of debility and must be treated at once by stimulants. In the second edition of his Elementæ, he says in a note that he must correct his former prescription, for that some of his young American friends and pupils, (and the American students were devoted to him,) informed him that without previous evacuations from the stomach and bowels, his stimuli would destroy such patients—and he followed their advice.—Can you suppose that old practitioners like myself would surrender a long-tried and successful practice in bilious fevers for this novel system of Broussais—no—never. But I cannot bring myself to believe that you embrace the ultra French pathology to the exclusion of prescriptions sanctioned by men of intelligence, observation, and nice discrimination. If you did I would say

"Ineedis per ignes
Suppositos cineri doloso."

"I agree with you that such lectures, (meaning lectures on pathology,) should be incorporated into your plan of public education, and rendered essential to obtaining a diploma.

"The success of your University has caused much dissatisfaction and envy—and now they wish to injure its fame, by giving out that the ultra pathology of France, is the ruling passion of your professors."

The two or three last years of Dr. Spence's life were spent in vain attempts to parry the disease which has already been alluded to, to wit, dropsy. Six months before it appeared he had suffered a violent bilious fever which was followed by attacks of gout; ascites and anasarca then succeeded. By the use of his favourite digitalis and excursions during the summer to watering places and on journies, he kept himself alive long after the time, which his malady had threatened as the term of his existence. The scintillations of a mind well stored with the knowledge of his profession, were never more evident than during his sickness. An occasional inactivity would come over him which seemed to have buried in undistinguishing obliviousness his profound, classical, and varied information, then an unexpected association of ideas would suddenly arise, and generating with it the fervid feeling of a highly cultivated mind, would be traced out in all its striking images and combinations.

As a practitioner of medicine he was attentive and sympathizing, and knew perfectly the deportment which suits the physician in the presence of a patient. In the instance of a professional brother, who visited him during his illness, and whose attention was withdrawn during the visit, and its attending interrogatories, to some unimportant and irrelevant object in the room, he said afterwards to a friend, "that man has not yet learned how to behave in a sick room."

The fruits of his professional experience were diligently recorded, he has therefore left many valuable manuscripts, the digest of which it is to be hoped will be presented to the public before long, by a competent person.

A few weeks before his death the gloom of a sick chamber was rendered still more melancholy, by the death of a favourite son in the progress of education. His punctuality as a correspondent ceased with this unexpected blow to his hopes as a parent, and sinking finally under the pressure of infirmities and grief, the next intelligence from him was through a connexion who communicated the tidings of his having died without a struggle.

He has left a widow and a small family of children to deplore his loss.

W. E. H.

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